national

SAFETY NEWS

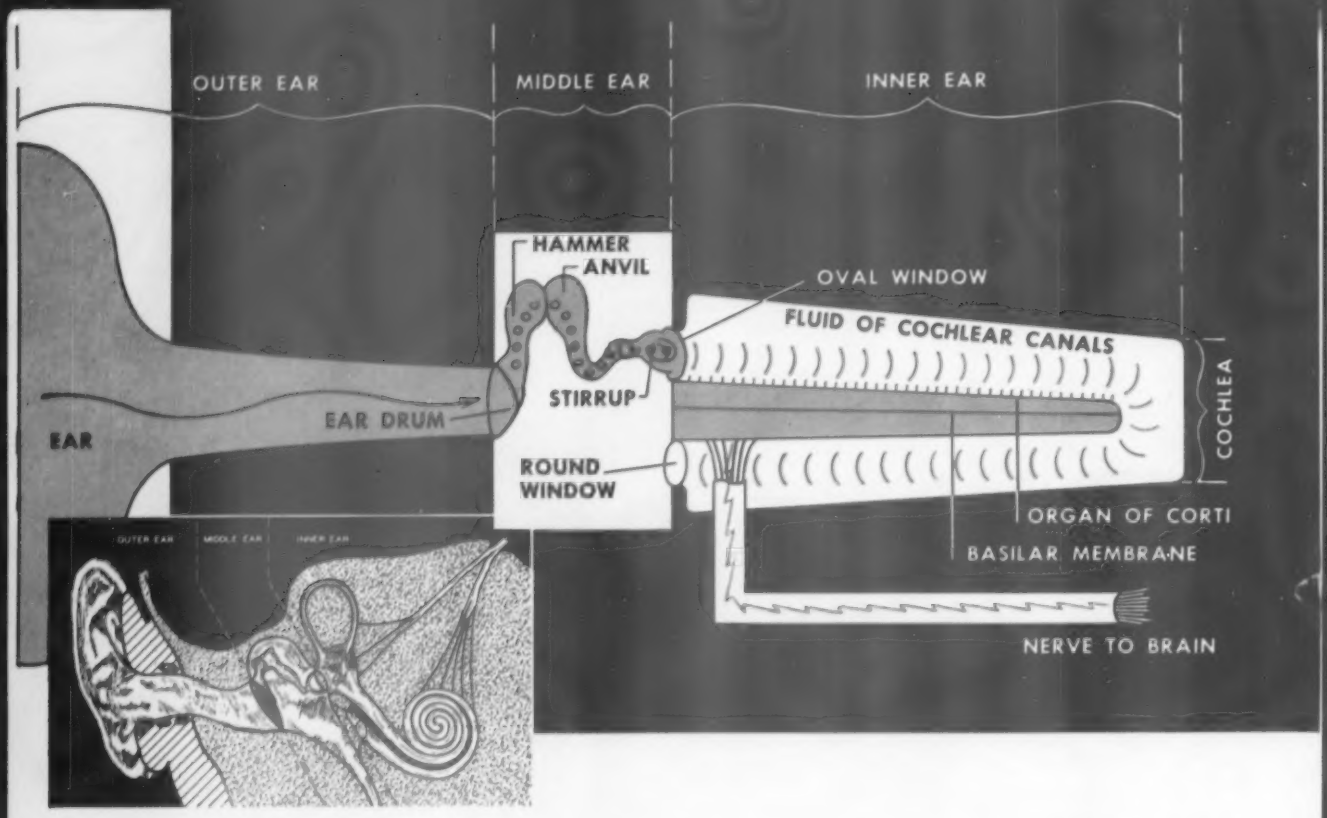
AUGUST 1955

UNIVERSITY MICROFILMS
EUGENE B.POWER
313 N.FIRST ST. IN-
ANN ARBOR,MICH. COMP DE

Guarding Our Forests

IN THIS ISSUE

More Air Power per Dollar
When Competition Is Keen
New Low Accident Rates in 1954



A simple explanation of how we hear NOISE

Today's growing concern about industrial noise has turned the spotlight on the human ear, and an understanding of this wonderful and intricate mechanism (see insert drawing) is becoming a must for many safety directors. Although much has been published on the ear, we hope this simplified explanation will fill some gaps.

The ear does a lot of work before we "hear." The OUTER EAR collects, funnels, and directs the sound waves. The MIDDLE EAR transmits them. The INNER EAR analyzes the frequency and intensity of the sound, then converts this information into nerve impulses that go to the brain.

This hearing process is charted in color line symbols on the simplified schematic drawing above. The wavy line ~~~~ in the outer ear represents sound waves entering the auditory canal. As these waves reach the end of the canal, they strike the ear drum, causing it to vibrate. These vibrations ooooo are picked up by the connecting hammer, anvil, and stirrup bones in the middle ear, and the message is transmitted to the oval window.

The pulsating action of the oval window, caused by the transmitted vibrations, moves the fluid)))))))) in the cochlear canal of the inner ear. The varying pressure from the fluid displacement is accommodated by a flexible round window in the cochlea.

The motion of the fluid in the cochlea stimulates the "hair cells" of the organ of Corti, a complex structure of sensory cells that rests on the basilar membrane. It is generally agreed that each of these "hair cells" is tuned to particular frequencies. This means that when certain sounds reach the fluid of the cochlea, only those "hair cells" tuned to the sound frequencies will respond. This stimulation originates impulses ^^^^ which are transmitted along the auditory nerve to the brain . . . and we hear!

Because it is vital that industrial workers HEAR, but at the same time are safeguarded against noise that could be harmful, M·S·A has developed the ear protection devices shown below. We will be happy to give you complete details.

Reprints of this ad are available on request.

M·S·A EARSAVER

—Peaked cap assembly for persons exposed continuously to relatively high level noise.

M·S·A NOISEFOE

—Head-set suspension type, easy to put on, take off. For intermittent entry into noisy areas.

M·S·A EAR DEFENDERS

—Insert type. Provide effective closure of ear canal. Easily fitted, comfortable. Three sizes assure comfortable fit.

MSA

SAFETY EQUIPMENT HEADQUARTERS

Call the M·S·A man on your every safety problem . . . his job is to help you

MINE SAFETY APPLIANCES COMPANY

201 North Braddock Avenue, Pittsburgh 8, Pa.

At your Service: 76 Branch Offices in the United States

MINE SAFETY APPLIANCES CO. OF CANADA, LTD.

Toronto, Montreal, Calgary, Edmonton, Winnipeg, Vancouver, Sydney, N.S.

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What a big difference in *comfort* the HINGED BRIDGE makes!

Your workers will say they never had comfort like they get in the new Willson Contour-Spec—and its new hinged bridge adds an extra measure of protection, too!

It's the *hinge* that permits equal pressure at every point of contact with the face . . . snug comfort regardless of facial contour! And it's the hinged bridge that means extra safety because there are no dangerous gaps around the eyes.

Contour-Specs conform to *any* face—heavy, lean, round, long or bony! Result is, a new concept of comfort combined with protection that encourages workers to wear them willingly.

Let them try Contour-Specs—see how well the 47-mm. lenses suit every eye size—feel how easily the lightweight, snug-fitting Butyrate plastic frame "sits" without pressure anywhere. Order a supply from your Willson distributor now.

NEW *Contour-Spec*® SAFETY SPECTACLES BY . . .

Design Patent 168988

More than 300 Safety Products Carry This Famous Trademark

WILLSON®

Leaders in Research and Development of Safety Equipment Since 1870

205 WASHINGTON STREET • READING, PENNA.

National Vol. 72, No. 2

SAFETY NEWS

Published monthly by National Safety Council

AUGUST, 1955

THE COVER: From his lofty post a lookout phones direction of suspicious smoke. The alidade helps in locating smoke by triangulation. (Photo courtesy Weyerhaeuser Timber Company)

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the shoe every man wants

new! STOCK NO. 1676 WITH OIL-RESISTANT CREPE SOLE

Show this to the man who "won't wear" safety shoes! It's the ONE style every man owns—wears—wants. We've detailed it like the best loafers made—with rolled collar—piped moccasin seam—elastic side gores that make it fit like a slipper. The thick, sporty-looking sole is oil-resistant crepe — won't spread out — won't pick up chips — wears like iron. And it affords the same rugged toe protection as any Lehigh safety shoe. For year-round wear, it will help prevent off-the-job injuries and layups as well as those in the shop.

Lehigh
SAFETY SHOE COMPANY
Emmaus, Pa.

SMALL BUSINESSES and ASSOCIATIONS

By A. M. BALTZER and ROBERT D. CURRIE
Small Business Program Staff, National Safety Council

Confidential—For Management Only!

"Confidential — For Management Only" is the title of an excellent brochure developed by the Municipal Contractors' Association, AGC, of Dallas. It pulls no punches in telling contractor members why they should have a safety program; it gives facts and figures on accident costs and it cites other reasons—legislation, public relations, employee relations, production efficiency, etc.—before getting into some excellent suggestions on "how to do it."

The brochure includes a listing of agencies, such as ASSE chapters and the National Safety Council, which can give help and lists several good texts and publications for contractors.

RSES' New Safety Manual

The *Refrigeration Service Engineers Society's* Safety Committee has recently compiled a loose-leaf safety manual containing more than 20 technical Data Sheets produced by the Society, suppliers, and the National Safety Council. It is one of the best and least expensive arrangements we have seen for a long time and should give a lot of valuable information in concise form to refrigeration service engineers.

The Manual is subdivided into sections such as "Electrical," "Fire Hazards," "First Aid," "Solvents," and "Safety Material from RSES." New Data Sheets are sent out as supplements from time to time under a small subscription charge arrangement. The cost of the Manual is $3.00 at time of issue.

The Manual illustrates the type of technical information that any association or business group can supply using readily available general material and whatever additional specific material is necessary. The Council's engineers, statisticians, and editors will gladly advise in the preparation of material and the compilation of any safety manual.

Nationwide Industry Safety Survey

The American Warehousemen's Association in cooperation with NSC recently conducted a nationwide survey enveloping 495 members of the AWA. The purpose of such a survey was to get the facts on which to base an association safety program.

Through this survey the association established facts that will make selling accident prevention much simpler. They found that they *did* have an accident problem; they found how serious the problem is. They compared their accident experience with those engaged in the same operations who were doing something about preventing employee injuries. They found out what accident prevention work is being done.

In addition, they got the picture on workmen's compensation insurance costs—not an insignificant item. The survey shows that some companies had obtained a credit on their compensation insurance rate based on their favorable accident experience; others were debited because of their poor accident experience — definite proof that safety pays.

The release of this safety survey analysis was the kickoff for a new association safety program based on a solid foundation—all done with the help of the Council's Small Business and Associations Program. This is a simple project, but certainly a worthwhile one that we heartily recommend to other associations getting started.

Cover of contest rules booklet for U. S. Brewers Foundation's fleet safety contest. USBF has adopted NSC contest rules.

Association Fleet Contest

Spurred on by the success of its accident reduction campaign which has reduced employee injuries in the breweries more than 50 per cent in five years, the *U.S. Brewers Foundation* now offers an opportunity to make the same gains in reducing accidents involving the industry's motor vehicles. The National Safety Council and the USBF co-sponsor an industry-wide contest under the Brewing Industry Division of the National Fleet Safety Contest.

Any employer in the brewing industry in the United States is eligible. To help insure 100 per cent participation, the Foundation has agreed to absorb the entrance fees of one fleet for each registrant.

Benefits from such a contest are many and varied—particularly from a public relations standpoint, for any industry's trucks are rolling billboards on the streets and highways.

The *American Gas Association* and the *Milk Industry Foundation* also conduct fleet safety contests in cooperation with the NSC. If your industry has a fleet safety problem, your trade association might be interested in such a contest. If so, why not suggest it?

Latest in Thom McAn Safety Firsts

S-1014 Six-inch, plain-toe work blucher, in new, supple Sylflex "silicone-tanned" black leather. Rivet reinforced. Leather-lined steel toe box. Neo-cord sole and heel.

Amazing silicone-tanned leather resists corrosive acids and oils— yet lets leather "breathe"

ANOTHER FIRST from Thom McAn! This new safety shoe is made of Sylflex-tanned leather. It really stays dry. Supple. Soft. Won't crack, curl or stiffen—even after soaking in harsh water-borne acids and oils. It keeps liquids out and lets air in. And it retains this unique "breathing" quality all the life of the shoe.

Sylflex is an exclusive new Dow Corning silicone process which has been called "the greatest advance in tanning of the past seventy years."

Consider all the other advantages you get with Thom McAn Safety Shoes—rugged protection of steel toe boxes, our traditionally fine workmanship, and quality leather. You'll see why Thom McAn's so good it's the best-selling shoe in all America.

SOLD TWO WAYS: 1. At Thom McAn Stores. **2.** Direct to your plant. Send today for details of our money-saving plant-sale plan and Thom McAn's 4-way employee purchase plan—plus descriptions of the Thom McAn Safety Shoe line. Write: Thom McAn Safety Division, 25 W. 43rd St., N. Y. 36, N. Y.

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Thom McAn
SAFETY SHOES
A Division of the Melville Shoe Corporation

THE SAFETY VALVE

We Love Parades

FOR SEVERAL HOURS on July 12 production was down in offices along Michigan Boulevard. The distraction was a huge and colorful parade by some 25,000 of the Nobles of the Mystic Shrine assembled in their annual convention. The papers say 400,000 people watched it.

It was a swell show, surpassing the Barnum and Bailey parades I remember in my youth. At the risk of drawing fire from loyal citizens of New Orleans, I doubt whether the Mardi Gras equals it.

For hours red fezzes filed past 425 North Mich.—on foot, on horse, and in vehicles ranging from Model T's to fire trucks and band wagons. Some of the marchers were in conventional clothes, many wore baggy Zouave pants, and some wore the flowing robes of the Bedouins.

There were military bands of varying degrees of musical competence. Some groups were playing pseudo-oriental tunes on squeaky musettes. An occasional calliope contributed to circus atmosphere. And there were two or three pipe bands with unoriental kilts.

Some camels were reported to be in the line of march but I didn't see them. Hillbillies and clowns in a variety of fantastic vehicles added a comic touch.

Working for NSC has made me think of casualties in connection with crowds. An ambulance sponsored by an auto dealers association kept circulating back and forth along the line of march. I did see one chap stretched out under a blanket on a stretcher with an attendant wearing a Red Cross armband hovering around. The papers reported next morning that one of the Nobles, whose heart wasn't as young as his ideas, dropped dead on the march.

Right after the last of the marchers left the starting point the city street cleaning squads stepped in with power sweepers and tank trucks cleaning up the litter left by man and beast. In less than an hour Michigan Boulevard was back to normal.

I haven't any idea what that parade cost—to the people who put it on, to the employers whose employees neglected their work to watch it and the losses due to disruption of traffic. But the boys in the parade seemed to be enjoying themselves in spite of aching feet, and those who watched got quite a lift. And that ought to be enough to justify it.

* * *

Incidentally, we at NSC headquarters who have to find accommodations for those of the 12,000 delegates to the National Safety Congress who can't sleep at home, can faintly appreciate the Shrine's problem in billeting 90,000 people.

* * *

What we call progress may be the exchange of one nuisance for another.—*Havelock Ellis.*

* * *

I have always considered the best guesser the best prophet.—*Cicero.*

* * *

In This Issue . . .

Keeping the U. S. Air Force at top efficiency to maintain order in an unsettled world calls for an enormous ground organization and huge stores of parts and supplies at depots all over the world. Aiding the efficient operation of this supermarket is a program of accident prevention that has won repeated safety awards. *(Page 18)*

* * *

Accidental deaths reached a new low level in 1954, according to *Accident Facts,* summarized in this statistical study. But we mustn't get the idea that any improvement is necessarily permanent. And in case we get complacent, we can remember the murderous record of the long week-ends at Memorial Day and Independence Day—with another coming up at Labor Day. *(Page 20)*

* * *

Contractors often used to complain that competitors underbid them because they didn't spend any money on safety devices. That excuse has been quite thoroughly discredited; low accident losses mean a favorable position when the bidding is close. *(Page 24)*

* * *

The fork truck has revolutionized materials handling in many industries. It has removed some hazards and introduced others but the balance is on the credit side. Here are some tips on getting the full benefit of their use. *(Page 28)*

* * *

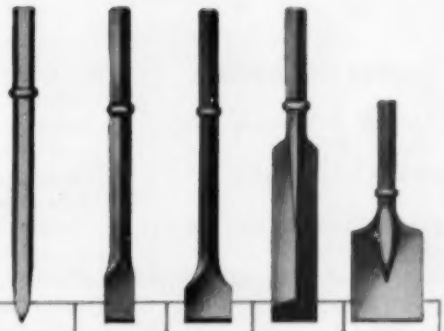
Every safety director has dreamed of having an ample budget and full support from management. Well, our fictional Safety Engineer, who recently took on a new job, has been handed the world on a silver platter by his new boss. Is he happy? Yes—but scared, too. In one year he has to cut a swollen accident record down to respectable size and win public good will for a plant that is regarded as a slaughter house in the community. If he fails—no alibis. *(Page 30)*

Carman Fish

play it safe

with I-R SPARK-RESISTANT paving breaker tools

These FORGED beryllium copper tools stay sharp longer... yet provide maximum protection against spark hazards



SHANK SIZE, HEX.	MOIL POINTS	NARROW CHISEL BITS	3" CHISEL BITS	3" x 12" DIGGING CHISEL	5" ASPHALT CUTTER
7/8" x 3¼"	X	X	X		
1" x 4¼"	X	X	X		X
1 1/8" x 6"	X	X	X	X	X
1¼" x 6"	X	X	X	X	X

● Wherever inflammable or explosive gases are present—wherever striking a spark means DANGER—paving breaker tools of special spark-resistant alloys are a "must".

Now, with this new line of Ingersoll-Rand beryllium copper tools, you can play it safe... and still get far greater tool life than ever before obtainable with this type of equipment. That's because I-R tools are FORGED—not merely cast—of a special high-strength beryllium copper alloy. A trial order will quickly demonstrate their superiority over any spark-resistant paving breaker tools you have ever used. Use them with Ingersoll-Rand paving breakers for peak performance. Write for Bulletin 4127-A.

Ingersoll-Rand

5-225

ROCK DRILLS • COMPRESSORS • AIR TOOLS • TURBO BLOWERS • CONDENSERS • PUMPS • OIL & GAS ENGINES

FOR DISTINGUISHED SERVICE

THREE TYPES of awards are given by the National Safety Council to industrial units in recognition of outstanding performance in accident prevention:

1. **THE AWARD OF HONOR** is available to units whose records, though not perfect, meet rigorous standards of excellence. These standards take into account the previous experience of the unit as well as the experience of the industry in which it operates. A unit must qualify on both frequency rate and severity rate. The Award of Honor is available also to units which complete 3,000,000 man-hours without a disabling injury.

2. **THE AWARD OF MERIT** has similar, but less exacting requirements. Minimum number of injury-free man-hours needed to qualify is 1,000,000.

3. **THE CERTIFICATE OF COMMENDATION** is available only for injury-free records covering a period of one or more full calendar years and totaling 200,000 to 1,000,000 man-hours.

Details of eligibility requirements may be obtained by writing to the Statistics and Research Division, National Safety Council.

★ ★ ★ ★ ★

AWARDS OF HONOR

Aluminum Co. of America, Davenport (Iowa) Works.

American Can Co., Fairport (N. Y.) Works.

The American Tobacco Co., Ashley Branch.

Argonne National Laboratory, Lemont, Ill., Entire company.

Atchison, Topeka & Santa Fe Railway System, Oklahoma Division.

Atlantic Coast Line Railroad Co., Transportation Department.

Ayco Manufacturing Corp., American Kitchens Division, Connersville, Ind.

Bethlehem Steel Co., Los Angeles Plant.

C. Brewer & Co., Ltd., Kilauea Sugar Plantation Co., Hilo, Hawaii.

Carrier Corp., Unitary Equipment Division.

Chain Belt Co., Plant No. 2, Milwaukee.

Chattanooga (Tenn.) Gas Co.

Chrysler Corp., Three awards: Atlanta Parts Plant, Delaware Tank Plant; Detroit Tank Plant.

The Cincinnati (Ohio) Gas & Electric Co.

Citizens Gas & Coke Utility, Indianapolis.

Columbia Gas System, Two awards: Charleston (W. Va.) Group, Pittsburgh Group.

Consolidated Gas, Electric Light & Power Co., Baltimore, Md.

Consolidated Paper Corp., Ltd., Weyagemack Division, Quebec, Canada.

Consumers Power Co., Jackson, Mich.

Container Corp. of America, Two awards: O. B. Andrews Co., Chattanooga; Rock Island (Ill.) Plant.

Convair, Forth Worth Division.

Walter L. Couse & Co., Detroit.

Curtis Cos., Inc., Clinton (Iowa) Division.

The Detroit Edison Co.

E. I. du Pont de Nemours Co., Seven awards: Chambers Works, Chemical Department; Martinsville Plant; Newark Plant; Niagara Falls Plant; Yerkes Film Plant; Yerkes Rayon Plant.

East Ohio Gas Co., Cleveland.

Food Machinery & Chemical Corp., Hoopeston (Ill.) Foundry.

Ford Motor Co., Twelve awards: Buffalo Assembly Plant; Buffalo Stamping Plant; Chester Assembly Plant; Cleveland-Engine Plant No. 1; Cleveland Foundry; Dearborn Engine Plant; Dearborn Iron Foundry; Dearborn Tool & Die Plant; Frame & Coldheading Plant; Metchuen Plant; Power & Utility Services; Twin Cities Assembly Plant.

General Electric Co., Appliance Motor Department, De Kalb, Ill.

General Foods Corp., Maxwell House Division, San Leandro, Calif.

General Mills, Inc., Research Laboratory, Minneapolis.

Great Northern Railway Co., Three awards: Dakota Division; Kalispell Division; Mesabi Division.

Harbison-Walker Refractories Co., East Chicago Works.

Harrisburg Railways Co., Harrisburg, Pa., Entire company.

Illinois Central Railroad, Memphis Terminal.

International Business Machines, Endicott (N. Y.) Plant.

Iowa Power & Light Co., Des Moines.

Iroquois Gas Corp., Buffalo, N. Y.

I-T-E Circuit Breaker Co., Philadelphia Plants.

T. L. James & Co., Inc., Ruston, La.

Kraft Foods Co., Sacramento Plant.

Lago Oil & Transport Co., Ltd., San Nicolas, Aruba, N. W. I.

Libbey, Owens, Ford Glass Co., Charleston (W. Va.) Works.

Linde Air Products Co., Speedway Laboratory.

Lion Oil Co., El Dorado (Ark.) Chemical Plant.

Los Angeles Union Passenger Terminal.

Lukens Steel Co., Coatesville, Pa.

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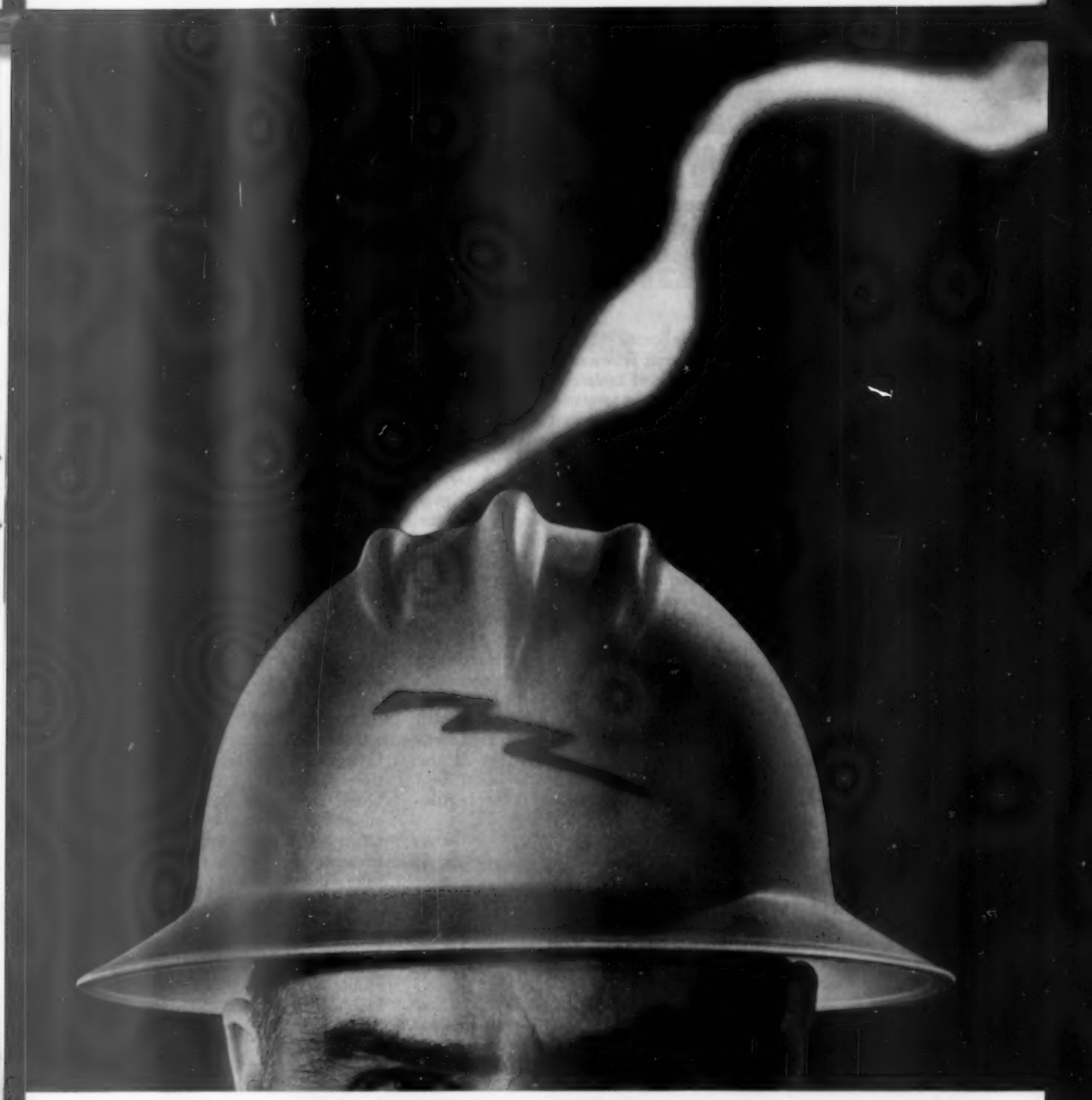

we dare anyone...

to compare test by test, from impact to shock resistance, Bullard's new electrical safety hat! Just as Bullard first brought head protection to general industry—now they are bringing a new standard in rugged head protection to the electrical industry. In independent laboratory tests Bullard KV hats surpassed every one of the standards set up by the Edison Electric Institute. Made of tough Estherene, a new Bullard developed compound, it is the lightest weight electrical hat on the market. One piece construction eliminates any holes, rivets or metal that might cause leakage.

BULLARD

E. D. Bullard Company
275 Eighth Street
San Francisco, Calif.

Write for independent laboratory report

Wire from WASHINGTON

By HARRY N. ROSENFIELD
Washington Counsel, National Safety Council

In the first six months of the present Congress's operations, 10,365 bills of one kind or another were introduced; of these, 111 bills became public laws, and 132 private laws. Safety measures continue to attract Congressional interest and activity.

Industrial Safety. Air and water pollution have been items of considerable Congressional concern. The Senate passed S. 890, authorizing a five year—$10 million program of grants to states for research on water pollution. S. 928 was approved by both the Senate and House, and sent to the President for his action. It authorizes a $25 million—5 year program of research and technical assistance in the abatement of air pollution. Under this bill the United States Public Health Service is authorized to make grants to aid states and private organizations for the furtherance of the program's objectives. This financial scope of the program accords with the proposals of the Interdepartmental Committee on Community Air Pollution.

H. R. 7066, to authorize temporary measures for flood control and anthracite mine damage, was approved by the House, and reported favorably by the Senate Committee on Interior and Insular Affairs.

S. 2299 would provide for broad research and training in the prevention, control, and cure of silicosis and other industrial diseases. The bill would establish a National Industrial Health Institute within the U. S. Public Health Service and would authorize grants to universities, hospitals, clinics, laboratories, other public and private institutions, and to individuals, for research in industrial health. It also would authorize the awarding of research fellowships, and the provisions of training and instruction.

The Atomic Energy Commission has proposed a set of regulations and safety rules setting up standards for users of nuclear and atomic by-product materials. These rules are intended to protect working personnel and the general public from the hazards of atomic radiation. Among the requirements for issuance of a license to a private person or corporation to operate or produce atomic facilities, is the showing that the applicant has learned to operate the controls "in a competent and safe manner." The Atomic Energy Commission also held a conference with representatives of the governors of the States, to discuss the health and safety features of these regulations.

Air Safety. The Senate passed S. 1855, to make available $252 million for grants to states and cities for a four year period of airport expansion, the money to be spent on a 50-50 matching basis.

S. 2225 and H. R. 6805 would provide that no part of any investigation of an aircraft accident by a military department, which was conducted in the interest of safety in air navigation, shall be admitted as evidence in any suit for damages growing out of any matter mentioned in such investigation or report.

The Bureau of Safety Regulation of the Civil Aeronautics Board has under consideration proposed amendments of the Civil Air Regulations concerning crew flight time limitations. The Bureau is proposing a sliding scale relationship between flight time and duty time.

Marine Safety. The House Committee on Interstate and Foreign Commerce reported favorably on H. R. 4090, which would require the installation of automatic radio telegraph call selectors on U. S. cargo ships with less than 2 radio operators. And the Senate Commitee on Interstate and Foreign Commerce reported favorably on S. 1791, with amendments, requiring lights on certain types of motor boats.

The Coast Guard issued miscellaneous amendments to its regulations concerning the transportation or storage of explosives or other dangerous articles or substances and combustible liquids on board vessels.

The Federal Communications Commission amended its regulations concerning stations on shipboard in the maritime service, amending provisions relating to safety certificates and the certificates of compliance with the safety convention.

Home Safety. H. R. 5222, exempting certain types of scarves from application of the Flammable Fabrics Act, was reported favorably by the House Committee on Interstate and Foreign Commerce.

The administration of the Food, Drug and Cosmetic Act, which law is approaching the 50th anniversary of its original act (in 1956), was the subject of an extensive survey by a 14-member group of citizens appointed by the Secretary of Health, Education and Welfare. This Citizens Advisory Committee on the Food and Drug Administration concluded that: "(1) the scope and complexity of the present enforcement and regulatory problems, if dealt with inadequately,

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how much could claims for hearing loss cost your company?

A flood of claims against companies by employees for occupational damage to hearing may now total over $2 billion, according to reliable estimates ☆ ☆ The fact that no such claims may have been filed against your company yet does not guarantee you will not be subject to them in the future ☆ ☆ Laws of 45 states already make accidental or traumatic loss of hearing compensable. About half of these states recognize gradual loss of hearing as an industrial disease. Even if you are located in a state which does not have these laws, your company may be subject to damage suits for gradual loss of hearing.

how can you protect yourself?

A number of far-sighted companies include audiometric tests of hearing as part of pre-employment physical examinations. These give an accurate record of employees' hearing and may protect you against future claims for hearing loss that do not result from conditions in your plant.

These companies also test the hearing of their employees periodically. If your plant uses noisy equipment that can damage hearing, it may save you many dollars to give your employees periodic audiometric tests of hearing.

take the first step now!

Beltone Hearing Aid Co. has developed a new one electronic tube circuit Audiometer that makes hearing tests easy and accurate. It is a light-weight, low-priced, trouble-free instrument that your plant nurse can use to give hearing tests. If you get a Beltone Audiometer and start using it now, you may save yourself costly damages for hearing loss.

Free booklet

Send today for illustrated booklet that explains the new Beltone Audiometer. There is no cost or obligation.

new

Beltone

AUDIOMETER

A precision testing instrument made by

BELTONE HEARING AID CO.

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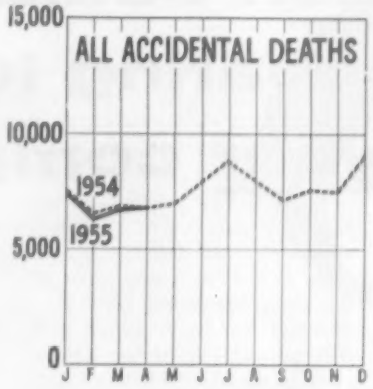
THE ACCIDENT BAROMETER

Prepared by the Statistics and Research Division, National Safety Council

ACCIDENTAL DEATHS in April totalled approximately 6,800, the same number as occurred in April a year ago. Increases in deaths from motor-vehicle and public non-motor-vehicle accidents were offset by decreases in deaths from home and work accidents.

The four-month death toll was 27,100, a reduction of 3 per cent from 27,800 in 1954. Most of the decrease occurred in fatal home accidents, but deaths from public non-motor-vehicle accidents also were less numerous. Motor-vehicle and work accident deaths showed little change from a year ago.



	1955	1954	Change
April	6,800	6,800	0
Four Months	27,100	27,800	—3%

Motor-Vehicle Deaths

The motor-vehicle death total in April was 2,700, an increase of 4 per cent over last year. However, compared to 1953, it was a reduction of 5 per cent.

The death total for four months was 10,480, about the same number as occurred in 1954. The four-month death rate per 100,000,000 vehicle miles was 5.7, a decrease of 7 per cent from the 1954 comparable rate of 6.1.

Of the 47 states reporting for four months, 21 had fewer deaths than last year, 1 had the same number and 25 had increases. Reporting cities with populations of more than 10,000 had an increase of 2 per cent for April, but a reduction of 4 per cent for the first four months of the year.

Regional changes from 1954 in the four-month death totals were:

North Atlantic	+ 4%
South Atlantic	+ 3%
North Central	0
South Central	— 1%
Mountain	—10%
Pacific	— 2%

Work Accidents

Deaths from work accidents totalled 1,100, or about 100 deaths fewer than occurred in April last year. The four-month death total was 4,500, no change from 1954.

The April frequency rate for plants in 18 sectional accident prevention contests conducted by the National Safety Council was 5.74, a reduction of 1 per cent from last year. The April rate for plants in community council contests was 5.87, a decrease of 3 per cent. In sectional contests, the four-month rate was 5.52, a reduction of 1 per cent; in community council contests, it was 5.36, a decrease of 10 per cent.

Public Deaths

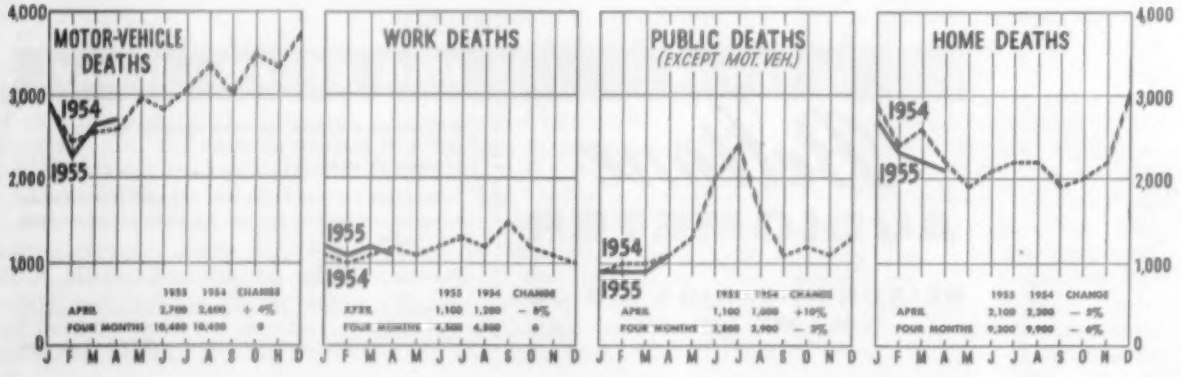
There were approximately 1,100 deaths from public non-motor-vehicle accidents in April, an increase of 10 per cent over 1954.

The four-month total was 3,800, or 3 per cent fewer than occurred during the same period last year. There were decreases in fatal falls, drownings and transportation accidents. Fatalities from burns were more numerous, while deaths from firearms accidents numbered about the same as in 1954. Increases were reported for children under 5 years of age and persons 65 years and over. Other age groups showed decreases with the largest change recorded for persons 15 to 24 years old.

Home Deaths

Home accident fatalities in April numbered about 2,100, or 100 fewer than in April a year ago.

The total for four months was 9,300, a decrease of 6 per cent from 1954. Most of the reduction occurred in mechanical suffocation deaths but fewer deaths occurred in each of the home accident types. Aside from a small increase in deaths of persons 45 to 64 years old, all age groups showed some reduction from 1954.



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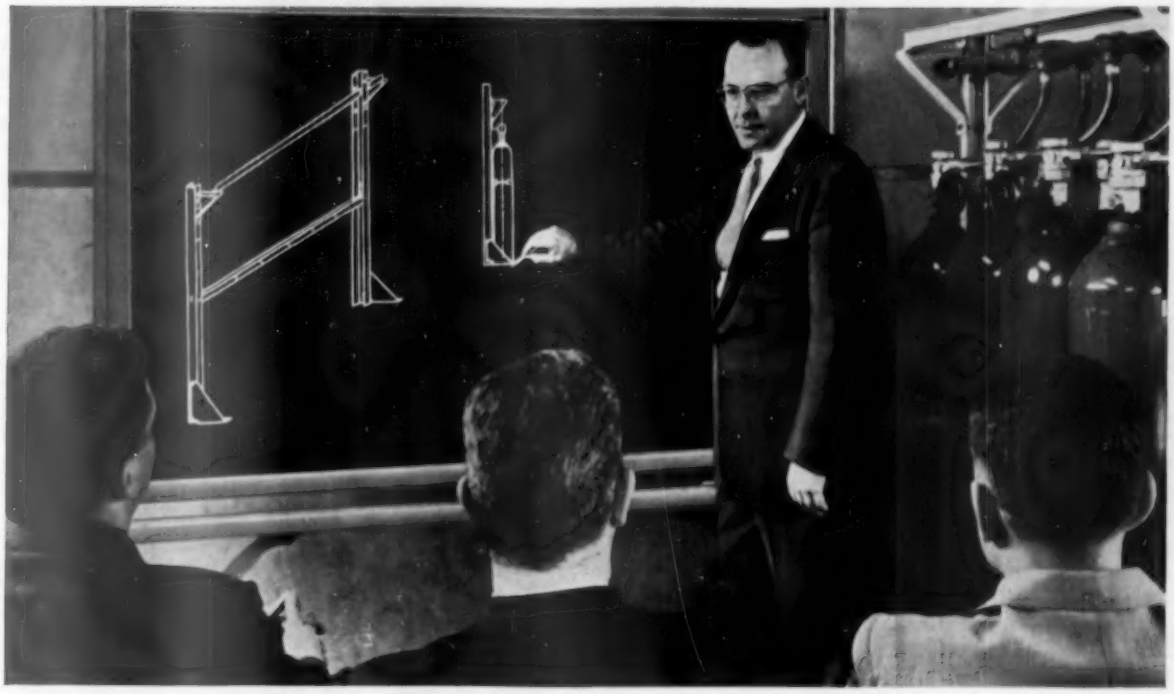

This Kidde Automatic Pressure-Operated CO_2 Extinguishing System is *brand new from the floor up!*

✓ CHECK THESE 10 FEATURES!

☐ **1.** NO FALLING WEIGHTS – No clumsy mechanical triggering methods. Pneumatic or Electrical Control Heads automatically trigger CO_2 cylinders, assure complete discharge!

☐ **2.** SELF-ENCLOSED PARTS – All moving parts of the new Kidde system are self-enclosed to prevent fouling or accidental operation!

☐ **3.** EASIER INSTALLATION – New racking arrangement is pre-drilled at the factory, eliminates need for special hangers, tools or outside material! Can be either "free standing" or wall mount.

☐ **4.** NO PARTS TO REPLACE – Even after a fire, operating parts of the new Kidde system can be re-set with a screwdriver. No parts need be replaced. Refill cylinders and system is ready for operation!

☐ **5.** SIMPLE, THOROUGH TESTING – By merely disconnecting control heads from cylinders, *all* operating parts (other than actual discharge of CO_2 gas) can be tested *in place!*

☐ **6.** QUICK VISUAL INSPECTION – All primary actuating parts fitted with easy-to-read visual indicator. Shows at a glance if system is "set" or "released."

☐ **7.** MULTIPLE PROTECTION – Automatically-operated Directional Valves let you protect more than one hazard from the same bank of cylinders!

☐ **8.** SIMPLIFIED WEIGHING – New racking arrangements lets you weigh CO_2 cylinders right in place without disconnecting them, providing uninterrupted fire protection even while cylinders are being weighed!

☐ **9.** NO OUTSIDE POWER NEEDED – The new Kidde system is completely self-contained, has rate-of-temperature-rise detectors which give sure protection even in case of outside power failure!

☐ **10.** AUXILIARY EQUIPMENT – Also available for use with the new Kidde system are devices for turning power on or off, for opening or closing doors, windows, dampers, etc.

Fully approved by Underwriters' and Factory Mutual Laboratories. Complete details of this revolutionary new system are contained in Kidde's Pressure-Operated System Booklet. Write for your copy today!

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CASES for COMMENT

Compiled by FRANKLIN G. PATER

Senior Engineer, Industrial Department, NSC

Handicapped Worker

Employee was crippled from polio. He has difficulty in getting around, and uses a cane.

The employee was walking in the office where he works when his cane slipped out from under him. He fell forward, breaking the fall with his hands but landed on his knees. He worked the rest of the day. Later his right knee stiffened and was sore. He treated the knee himself by baking it but called his doctor two days later. The doctor diagnosed the case as a small amount of fluid under his right knee cap, and a possible torn tissue. The doctor advised keeping off his feet and he was off for five days.

There is evidence that this man had water on his right knee before.

The floor was clear of obstructions and dry. It was not waxed, and was not considered slippery.

Decision. The injury should not be included in the industrial injury rates. It was agreed that the employee's cane slipped rather than the employee, and a normal employee would not have been using a cane, therefore, would not have slipped.

Assault by Thugs

The company has two buildings located across the street from each other. There is a tunnel under the street for employees to use in commuting between the two buildings, or they can cross the street on the outside.

One of the employees on the night shift must, as a part of his job, travel between the two buildings. At the time of the incident outside lighting was poor and the street was apparently deserted. The employee had been informed that the door of the building he had to go to would be locked the last half hour of every hour and that he could not get in at that time. This was unusual but one of the watchmen was off and his partner had to lock the door when he made his rounds.

The employee crossed the street to go to the locked building. He apparently forgot about the locked door. When he approached the building, he was assaulted by two men who appeared out of the darkness. There had been repeated reports of thefts from cars parked in the street and perhaps these men were in the process of a robbery when the employee approached. He was slashed on the face and stabbed in the ribs. Fortunately, he was able to return to work after a week. The men who assaulted him were not company employees.

Decision. The injury should be included. This is based on the fact that the injury arose out of, and in the course of employment.

Comment. The company has complete control over the employee's activities while he is working on his regular shift. However, the company cannot control the actions of the public, even though the public thoroughfare is between two buildings of the company's plant. Therefore, the company should give some consideration to trying to keep the employees in company controlled areas while on the job.

IS THAT INJURY chargeable to your occupational injury record?

In some cases there is reasonable doubt as to whether the injury arises out of or in the course of employment. This can usually be decided by consulting ASA STANDARD CODE Z16.1-1954. If there is any doubt as to interpretation of the Code, the Committee of Judges of the American Standards Association's Sectional Committee is available to review the facts.

A few cases are discussed here. It is hoped they will aid readers in planning preventive measures as well as in determining the chargeability of accidents.

Slippery Floors, Weak Back

A maintenance laborer was performing a regular function of his job, lowering a 2½-gallon bucket with a rope attached to the handle into a pit containing enamel slip. When the bucket was full, the employee raised the bucket with the rope and emptied it into a nearby container. Due to the nature of the enamel slip, the area surrounding the pit has always been very slippery. It has been a long-standing practice for the men to wear rubber boots.

The combination of rubber boots and slippery floor area makes for poor footing and some sliding is inevitable in the performance of this job. While emptying the bucket into the container, the employee slipped slightly and at that time noticed a rather sharp pain in his back. He was sent to the doctor who diagnosed the condition as a muscular spasm and further advised that the employee is a person with an unstable back who could suffer a spasm from almost any back motion. The employee lost 11 days.

Decision. The injury should be included as a temporary total disability. One of the judges was of the opinion that although the employee had an unstable back and could suffer such a back ailment from almost any back motion, the fact remains that this injury did arise out of the slip in connection with his employment.

Comment. Management might give some consideration to the elimination of the slippery floor area. This could be accomplished by a better drainage arrangement or eliminating the splashing or dripping of the material onto the floor which caused a slippery condition. If this is not possible, then the men should be given shoes that will not have a slippery surface such as wood soles, or spikes or calks similar to a logger's shoes.

Civilization is not what your ancestors have built, but your capacity to build—intellectually and spiritually as well as architecturally.

—Elmer Davis

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national
SAFETY NEWS
AUGUST 1955

Messages to Millions

"CARELESS DRIVING is kid stuff!"

If you rode down to work on one of the mass transportation vehicles on a recent morning, you may have noticed a card with that slogan as you glanced up from your newspaper. Beside it was a childish sketch and a crudely lettered caption: "Jimmy's daddy drives like the wild man of Borneo. It's not funny; he scares us. Grownups should grow up when they drive. Accidents kill more kids than anything else."

In a corner of the card was the Green Cross for Safety and a crossed quill and sword—the emblem of The Advertising Council's Public Service campaign.

"Stop Accidents" is one of the campaigns conducted by The Advertising Council. Others urge the public to buy U. S. Savings Bonds, support better schools, go to church Sunday, give to the Community Chest and the Red Cross, take part in Civil Defense Activities, get rid of fire hazards, and in many other ways build up a safer and better country.

All classes of media are used for these campaigns—national magazines, trade and house publications, newspapers, indoor and outdoor posters, radio and television. There are few persons in this country who have not been reached by these appeals. Of those reached, a substantial number have been moved to action.

Each of these campaigns is headed by a volunteer coordinator, an advertising man prominent in the field. Planning and production details are carried out by volunteer advertising agencies.

Into these advertisements go the same thought and skill that are used in advertising commercial products. The appeal, the copy, and the art work are all studied carefully.

American industry, which helped to found The Advertising Council, has contributed liberally to its support in money, manpower, counsel, and advertising time and space. Hundreds of advertisers—national and local, large and small—have donated extensive advertising time and space in every medium to projecting these public service programs.

The total cost of these programs, at regular rates, would be beyond the budget of any corporation or group of corporations. But they are contributed without pay by public-spirited citizens for the service of more than 160 million Americans.

Conveyorized material handling is the rule in AMC installations—even to this retractable loading device for transport planes at Kelly Air Force Base, Texas.

Safety Helps Bring MORE AIR POWER PER DOLLAR!

By NORVAL BURCH

HOW DOES a multi-billion-dollar-a-year business, employing 160,000 persons scattered around the world, win the National Safety Council's coveted Award of Honor *three years in a row*?

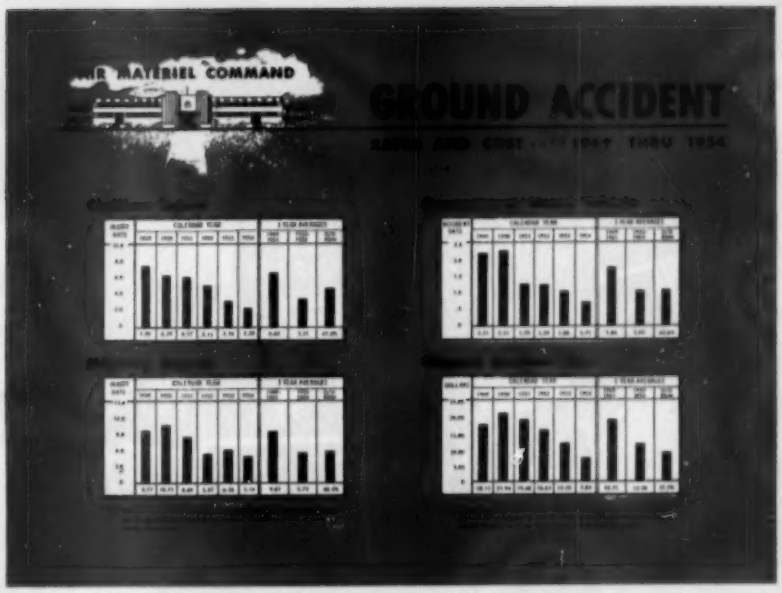
That question intrigued the editors of NATIONAL SAFETY NEWS when reports on 1954 performance showed that the Air Materiel Command (world's biggest business) had achieved that record—despite its bigness; despite its far-flung operations, and, most significantly, despite the fact that AMC's work involves practically every known industrial and occupational hazard.

Air Material Command is a mammoth supermarket, supplying every item needed to keep the United States Air Force the strongest in the world. It has total assets of more than 30 billion dollars—far more than the combined total of the two largest private corporations in the U. S. More than a million different items are bought regularly by highly trained purchasing agents, stocked by equally capable storekeepers in the most modern warehouses, and rushed to any point on the globe on the shortest possible notice. No plane of the U. S. Air Force must be grounded for lack of parts and supplies.

When the question was raised at AMC Headquarters (Wright-Patterson Air Force Base, Ohio), as to how this amazing improvement in the AMC safety performance is achieved year after year, the AMC Commander, Gen. Edwin W. Rawlings, very cordially

Brookley Air Force Base at Mobile, Ala., only Air Material Area with ocean port facilities, "cocoons" jet fighter planes, loads them aboard carriers for overseas.

Safety begins at the top in Air Materiel Command, with Gen. Edwin W. Rawlings, USAF, Commander, demanding effective program throughout the command.



Six-year safety performance in AMC, reflected in this chart, shows decided improvement in last three years, explains three NSC Awards of Honor in a row.

asked, in effect: "Why don't you see for yourself?"

So he arranged, through Brig. Gen. A. V. P. Anderson, Jr., Director of Personnel and Support Operations, and Col. Leonard F. Carter, Chief of Ground Safety for AMC, for your writer to tour half a dozen typical AMC installations—Air Materiel Areas and Air Materiel Depots — for first-hand observations. What I saw on that brief trip led me to these conclusions:

1. Safety is demanded by top-level command as a necessary counterpart of efficient operation.
2. Safety programming becomes an AMC management function, carried out through appropriate administrative channels to every level of decentralized operations.
3. Safety performance, as exemplified by the rank-and-file AMC employee, is both product and source of the high morale found throughout the command; attitudes reflect the skills of enlightened and efficiently organized management.

—*To page 26*

Directorate of Personnel and Support Operations, AMC, under Brig. Gen. A. V. P. Anderson Jr., wants safety integrated into every operation in global network.

AMC maintenance personnel at Mobile Air Materiel Area, safeguarded in every manufacturing, assembly or overhaul operation, employ much special equipment with a high safety factor, such as this scaffold for tail structure on which mechanics may work in comfort.

Only two disasters in 1954

Death Rate Down Seven Per Cent

Fatality rates for 1954 lowest yet recorded

By A. D. BATTEY

THERE were approximately 90,000 accidental deaths in 1954, a 5,000 drop from the 1953 total—the largest reduction recorded in any year since the decrease of 5,600 from 1941 to 1942. The 10-year change from 1944, allowing for changes in classification methods, was a decrease of 1 per cent.

The 1954 accidental death rate was 55.8 per 100,000 population, with no adjustment for changes in the age distribution of the population since 1940. If such adjustment is made, the rate drops to 54.3. The change from 1953 for the adjusted rate was a 7 per cent drop.

The 1954 rates, both crude and adjusted, are the lowest ever recorded. Direct comparison with years before 1949 cannot be made because of changes in death classification methods, but allowing for those changes, the 1954 crude rate was 32 per cent less than the 1903-12 rate. If deaths from motor-vehicle accidents—which were few in 1903-12—are omitted, the death rate for other accidents showed a decrease of more than one-half by 1954.

A. D. BATTEY is Assistant Director, Statistics and Research Division, National Safety Council, and editor of *Accident Facts*. This summary of the accident experience of 1954 is based upon *Accident Facts—1955 Edition*, the Council's annual compilation of essential information about accidents. This booklet was recently distributed to members.

Only two disasters in 1954 caused more than 50 deaths—the August 31 and October 15 hurricanes along the Atlantic Coast and in the New England states. In accidents resulting in five to 100 deaths the 1954 death toll was about 1,200 or 600 fewer than occurred in such accidents in 1953, according to tabulations of the Metropolitan Life Insurance Company.

Nonfatal injuries in 1954 are estimated at about 9,050,000. Approximately 320,000 of the injuries resulted in some permanent impairment, ranging from the loss of part of a finger to total crippling. The remaining injuries resulted in temporary disability extending beyond the day of the accident, but in many cases to only a few days.

Accidents vs. Disease

Detailed information on deaths from disease is not available for 1954, but it is reasonably certain that accidents held the same position as in 1952. In that year the crude death rate for accidents was approximately 62—the fourth highest rate for any cause. The leading cause was heart disease, with a death rate of 356. Cancer was second, with a rate of 143, and vascular lesions of the central nervous system were third with 107.

Seventeen years earlier, in 1935, pneumonia and nephritis had death rates considerably higher than the accident rate, but by 1952 the pneumonia rate had dropped 56 per cent and the nephritis rate 51 per cent as a result of new medicines and improved medical techniques.

From age 1 to age 35 there were more deaths in 1952 from accidents than from any other cause.

The 1952 accident rate for males was much higher than that for females—87 compared to 37.

For males, only heart disease with a rate of 427, cancer with a rate of 149 and vascular lesions with a rate of 105 outranked accidents as a cause of death. Among females, also, only three causes had higher death rates than accidents: heart disease, 288; cancer, 137; and vascular lesions, 108.

DEATHS AND DEATH RATES OF WORKERS BY MAJOR INDUSTRIES, 1954

Industrial Group	Total Deaths	Deaths per 100,000 Workers	No. of Workers per Death
Mining, quarrying, oil and gas wells	800	107	940
Construction	2,400	74	1,350
Agriculture	3,800	60	1,650
Transportation	1,200	41	2,400
Service	2,300	16	6,300
Public utilities	200	14	7,000
Manufacturing	2,000	12	8,000
Trade	1,300	11	9,100

For males alone accidents were the leading cause of death from age 1 to age 37.

Costs. Accident costs that can be estimated totaled approximately $9,800,000,000 in 1954. Wage loss, including the present, or discounted, value of anticipated future earnings for deaths and permanent total disabilities, was about $3,200,000,000; medical expense, $700,000,000; overhead cost of insurance, $1,900,000,000; property damage in motor-vehicle accidents, $1,600,000,000; property damage in fires, $871,000,000; indirect costs due to work accidents, $1,500,000,000.

Age Distribution

In 1954, as in other years, the best accidental death record was for children 5 to 14 years old. The death total was 5,900, and the death rate per 100,000 population was approximately 20. The rate was 7 per cent below the 1953 rate, and 51 per cent less than the average rate for the ten years 1903 to 1912.

The largest accidental death total, and the highest rate, was recorded for persons 65 years old and older. Deaths numbered about 24,900 and the rate was 182. This was 7 per cent less than the rate for 1953; and 22 per cent below the 1903-12 average rate, after allowing for changes in methods of classifying deaths.

In the age group 25 to 44 years the 1954 rate was 44, an 8 per cent decrease from 1953, and a 47 per cent drop from 1903-12. For children under five years there were 46 deaths per 100,000 population, a decrease of 7 per cent from 1953 and 52 per cent less than for 1903-12. Persons 15 to 24 years old had a 1954 rate of 56—6 per cent below the 1953 rate, and 13 per cent under 1903-12. Among people 45 to 64 years old the rate was 57, a 6 per cent decrease from 1953, and a 44 per cent drop from 1903-12.

Regional Death Rates

Of the 47 states reporting accidental deaths in 1954, 16 had death rates below 55, 16 had rates of 55 to 63, and 15 had rates higher than 63. In general, the lowest rates were recorded in the Middle Atlantic states, with a regional rate of 46, and the New England states, 47. The average rate for the Mountain states was 78. In the rest of the nation rates varied only from 52 to 63.

Type of Accident

Motor-vehicle deaths ranked first among accident types in 1954, with a total of 36,000 deaths, a decrease of 6 per cent from 1953. Falls ranked second with 19,900 deaths or 3 per cent fewer than occurred in 1953. These two types of accidents alone accounted for three-fifths of the accidental death total. No other accident type even approached them in importance. Deaths from fire burns, the next most important type, numbered 6,300, only one-third the death total for falls.

The population death rates in 1954 were the same as or smaller than the 1953 rates for the eight most important types of accidents. The rate for railroad ac-

cidents dropped 15 per cent, for motor-vehicle accidents 8 per cent, for burns and drownings 7 per cent, and for falls 5 per cent. The rates for poisons, poisonous gas and firearms accidents were the same as in 1953.

Table II gives the death total, the death rate and the change in rate for the principal types of accidents.

Work Accidents

Deaths in work accidents totaled about 14,000 in 1954, or 1,000 fewer than in 1953. Disabling injuries numbered about 1,850,000, compared to 2,000,000 in 1953.

These deaths and injuries cost the nation a total of approximately $3,200,000,000. Of this amount $950,000,000 represents the value of services lost to the nation as a result of disability, even though the worker himself was compensated for a part of the loss. Medical care for injured workers cost $300,000,000 and overhead costs of insurance totaled $430,000,000. The remaining $1,500,000,000 represents the estimated money value of damaged equipment and materials, production slow-down and time lost by other workers not involved in the accidents.

The cost of work accidents to industry alone averaged $50 per worker, but this average cost includes lower costs in many organizations where effective safety programs are being used. Where little has been done about accident prevention, the average cost of accidents is usually much higher.

Absence from the job by injured workers was responsible for a total loss of working time of about 40,000,000 man-days. This figure does not include time lost on the day of the injury or time required for further medical treatment after return to work. Additional losses, due to reduced productivity of others in the neighborhood of the accident, delays while damaged equipment was being repaired, and the man-day equivalent of damaged product or equipment brought the total time lost during 1954 to about 230,000,000 man-days — equal to the working time of more than 900,000 men for a full year.

Death Rates

About 25 out of every 100,000 workers in the nation were killed in work accidents during the year. This average for all industry results from death rates for individual industries ranging from a low of 11 per 100,000 workers in the trade industry to a high of 107 deaths per 100,000 workers in mining, quarrying, and oil and gas wells.

Off-Job Accidents

As usual, many more workers were killed off the job than on the job during 1954. Out of a total of 43,500 worker deaths during the year, about 29,500 or 68 per cent were the result of non-work accidents—in the homes, on the streets and highways, or in other public places. The following table compares the death and injury totals for on-job and off-job accidents to workers and the classification of the off-job injuries:

Place of Accident	*Deaths*	*Injuries*
At work	14,000	1,850,000
Away from work	29,500	2,300,000
Motor-vehicle	17,000	600,000
Public non-motor-vehicle	6,300	800,000
Home	6,200	900,000

The ratio of off-job injuries to total injuries is even higher in organizations with good on-job safety programs. Several industrial establishments with good safety records have reported that off-job accidents are responsible for 85 to 90 per cent of the disabilities due to accidental injuries.

Motor-Vehicle Accidents

Motor-vehicle accidents in 1954 were responsible for 36,000 deaths in the United States. These accidents also caused 1,250,000 non-fatal injuries, of which 110,000 left the victim with some permanent impairment.

Motor-vehicle travel in 1954 was greater than in 1953, amounting to about 560,000,000,000 vehicle-miles. The death rate per 100,000,000 vehicle miles was 6.4 —10 per cent less than the 1953 rate, and the lowest rate on record. In 1944 the rate was 11.5, so in ten years it dropped 44 per cent.

Motor-vehicle accident costs were estimated at $4,400,000,000 in 1954, of which $1,600,000,000 was property damage.

In cities and towns with more than 2,500 population 9,000 persons were killed in motor-vehicle accidents. In rural areas and towns of less than 2,500 population the death total was 27,000. Deaths in 1953 were classified differently, so comparisons cannot be made.

TRENDS IN ACCIDENTAL DEATHS, 1953 TO 1954

TABLE I—By Age

Age Group	Total Deaths	Deaths per 100,000 Persons	Change in Rate from 1953
All Ages	90,000	55:8	—7%
0 to 4 years	8,100	45.5	—7%
5 to 14 years	5,900	20.2	—7%
15 to 24 years	11,900	56.3	—6%
25 to 44 years	20,600	44.4	—8%
45 to 64 years	18,600	56.6	—6%
65 years and over	24,900	181.6	—7%

TABLE II—By Type

Type of Accident	Total Accidental Deaths	Death Rate per 100,000 Persons	Change in Rate from 1953
Motor-vehicle	36,000	22.3	—8%
Falls	19,900	12.4	—5%
Burns	6,300	3.9	—7%
Drownings	6,200	3.9	—7%
Railroad	2,700	1.7	—15%
Firearms	2,200	1.4	0%
Poisons (except gas)	1,400	0.9	0%
Poisonous gas	1,300	0.8	0%

Until the end of the war, the mileage death rate was approximately 11.5 per 100,000,000 miles of travel. Had the mileage death rate been the same in 1954, the death total would have been approximately 64,000, or 28,000 more than the actual number.

Home Accidents

Accidents on home premises in the United States were responsible for 27,500 deaths in 1954, or about 1,500 fewer than occurred in 1953. Nonfatal injuries totaled 4,100,000. This means that nearly 3 per cent of the entire population of the country suffered disabling injuries in home accidents; and 100,000 of these were left with some permanent impairment. These accidents caused an economic loss of about $750,000,000.

Most of the decrease from 1953 was in deaths from falls, burns, and miscellaneous, unclassified accidents. A small increase occurred in fatal firearms accidents.

The leading cause of home deaths continues to be falls. Of these falls, well over four-fifths were of persons 65 years or more of age. However, accidental injuries from falls in the home are not exclusively a problem of old age. Older persons do not recover from their injuries as readily as younger persons, but various home accident surveys have demonstrated that falls are a leading cause of injury in the home among all age groups.

Public Non-Motor-Vehicle

Approximately 15,500 persons were killed in public non-motor-vehicle accidents during 1954. Of these, 3,500 were killed in accidents involving street cars, railroad trains, boats, airplanes, bicycles and other road transport vehicles, but not involving motor vehicles. The largest single cause of public nontransport deaths was drowning, with a total of 4,000 deaths not including those associated with transport accidents or those in which the person was drowned while he was at work. Deaths from falls ranked second with 3,100, deaths from firearms accidents third with 1,100, and fire burns and injuries associated with conflagrations fourth with 550 deaths.

NEEDLESS DEATHS

(Chicago Tribune)

HEADLINES after the Fourth of July week-end stressed the highway death toll, which had reached a record level of 407 by Tuesday, with more reports still expected. More tragic, in the sense that they were more easily preventable, were the 249 drownings reported at the same time.

Prudent persons are killed on the highway every day by drivers who refuse to recognize that a two-ton automobile moving at 70 miles an hour is a terrible engine of death. Better law enforcement, education, and improved highway and automobile designs are all necessary to reduce highway fatalities, and the campaign is bound to be a long and difficult one.

What sharpens the tragedy of drownings is that so many of them are needless, and result from neglect of some elementary precaution, often within the family of the victim. Swimming instruction of children is better organized and more widespread today than ever before. The Red Cross conducts its admirable life saving classes all over the country, and safety rules have been publicized for years by the National Safety Council and recreation authorities, yet over the last week 249 people discovered, too late, that death lurked beneath the water that seemed so sunny and safe.

The water is never safe. People who realize that will have fewer tragedies for which to blame themselves.

Railroad

During 1954 a total of 2,625 deaths occurred in railroad accidents or 16 per cent fewer than occurred in 1953. This total includes deaths of passengers, employees, other nontrespassers and trespassers.

Deaths of passengers on trains dropped from 50 in 1953 to 23 in 1954. The passenger death rate in terms of passenger miles traveled was 0.08 per 100,000,000 passenger miles. Trespasser deaths numbered 860, a 15 per cent decrease from the previous year.

Deaths of employees on duty totaled 228, a 33 per cent decrease from 1953. The employee death rate, for Class I roads only, was 0.09, or 25 per cent below the 1953 rate. The frequency rate for all injuries—deaths, permanent disabilities and temporary disabilities causing absence of one or more days—was 12.88 injuries per million man-hours worked.

Deaths from grade crossing accidents numbered 1,377. Collisions between trains and motor vehicles accounted for 1,229 of these deaths, a 13 per cent decrease from 1953. National motor-vehicle mileage was 4 per cent greater than in 1953, but train mileage dropped 7 per cent indicating a net decrease in exposure to grade crossing accidents.

Aviation

The 1954 passenger death rate for the domestic passenger-carrying operations of scheduled air lines was 0.09 per 100,000,000 passenger miles, the lowest rate ever recorded. The next lowest rates were 0.35 for 1952 and 0.58 for 1953. The passenger death rate in 1930 was 28.6. Out of a total of 25 persons killed in domestic scheduled air lines passenger carrying operations, 16 were passengers, 7 were crew members, and 2 were occupants of a plane with which an airline plane collided.

Deaths in civilian nonscheduled domestic air-carrier service and private flying combined totaled 700 in 1954, or 6 per cent fewer than occurred in 1953. Of these, 11 deaths occurred in the operations of nonscheduled air-carriers, and 689 in other commercial operations and in private flying.

When Competition Is Keen

By WILLIAM A. LUNA

Low accident costs are a real factor in close bidding. The Advanced Analysis Method can help a contractor uncover many sources of loss

FROM the point of view of insurance costs, an interesting fact emerges—that a high accident rate can be a real factor in competitive bidding. The mathematical relationship between expected losses and computed premiums is, of course, an actuarial problem. This is a subject in itself.

For our purpose here, it is only necessary to realize that construction involves a certain risk. This risk, which may be regarded as a measure of exposure to accidents, is substantially a controllable factor, which is dependent upon the loss prevention activities instituted and applied by management.

A contractor pays premiums for compensation according to the manual rates established by the State Rating Board. If his losses at the end of the year are below expectations, he will enjoy a credit. If losses are above expectations, he will suffer a loss, known as "charge."

This variation in rate below or above the manual rate is a measure of his "experience" which affects the "adjusted" rate. A high charge can be a real factor in competitive bidding.

Consider a hypothetical structural steel erection job, on which the engineer's estimate is $100,000. The following figures and corresponding insurance cost have been simplified for clarity. The breakdown between overhead and profit may be roughly as follows:

Overhead.....9 per cent or $9,000
Profit.....8 per cent or $8,000

Taking the compensation manual rate for structural steel as $24 for every $100 of payroll, the insurance cost is computed at $4,150. Under these circumstances it would be possible for one contractor to enjoy a credit high enough so that his adjusted insurance rate would bring the cost down to around $1,580.

Another contractor bidding for the same job might be compelled to assume an adjusted insurance rate such that his cost would be around $8,230, thus sacrificing a good part of his profit, and placing himself in an unfavorable competitive position.

The actual cost of accidents to the contractor is well over four times the compensation cost. This minimum ratio was arrived at through an extensive study made by the Associated Contractors of America. A few cases will serve as illustrations.

Case 1. Monolithic pouring operations were under way on the arch of a rigid-frame reinforced concrete bridge. The contractor's design of forms called for 8 x 8-in. posts, 16 to 18 ft. long. However, because he did not have this size, he decided to use 14- to 18-ft. lengths in conjunction with short pieces to make up the required height.

The butted joints were made fast with scabs on one side only, with no lateral bracing connecting the short pieces of adjacent posts.

During the pouring operation, the lateral thrust built up by the freshly poured concrete in the arch haunches caused the column joints to topple, whereupon the entire form collapsed.

As a result, 10 men received minor injuries costing $100. This represented the cost to the insurance carrier. However, it cost the contractor $17,000 before he was in a position to start pouring again.

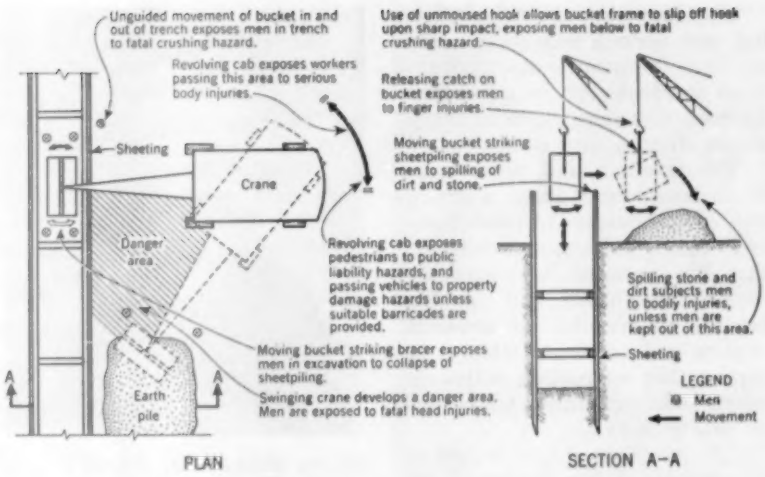
Case 2. While working on the construction of a shipway, a dock builder fell off a stringer, dropping 18 feet to the ground. An ambulance was instantly called. Sixty men crowded around the injured man for almost an hour, until the ambulance arrived. It was later learned that the man was not seriously hurt.

Total cost of insurance was $35. However, the cost to the contractor through the loss of a total of 60 man-hours of production and idleness of heavy equipment, was estimated to be $150—a ratio of over 4:1 against the contractor.

Case 3. The ventilation system on a mile-long rock tunnel project delivered 5,000 cu. ft. per min. of fresh air to the tunnel heading. This amount of air in a tunnel with a 750 sq. ft. cross-sectional area was proved to be inadequate at the very start of the job. Gasoline and diesel-powered equipment was in constant use in the tunnel and 1,000 pounds of dynamite was used every day.

A steady stream of tunnel miners had to be given first aid necessitated by equipment and blasting fumes. Two hours out of every 24 were required to clear the tunnel heading of dynamite fumes. Fifty miners had to remain idle for these two hours. By a conservative estimate, produc-

WILLIAM A. LUNA is Senior Safety Engineer, Liberty Mutual Insurance Company, New York Division. This article has been adopted from a talk before the 1954 Convention of the American Society of Civil Engineers, Atlanta, Ga.


Unguided movement of bucket in and out of trench exposes men in trench to fatal crushing hazard.
Revolving cab exposes workers passing this area to serious body injuries.
Sheeting
Crane
Danger area
Use of unmoused hook allows bucket frame to slip off hook upon sharp impact, exposing men below to fatal crushing hazard.
Releasing catch on bucket exposes men to finger injuries.
Moving bucket striking sheetpiling exposes men to spilling of dirt and stone.
Revolving cab exposes pedestrians to public liability hazards, and passing vehicles to property damage hazards unless suitable barricades are provided.
Spilling stone and dirt subjects men to bodily injuries, unless men are kept out of this area.
Moving bucket striking bracer exposes men in excavation to collapse of sheetpiling.
Swinging crane develops a danger area. Men are exposed to fatal head injuries.
Earth pile
Sheeting
LEGEND
Men
Movement
A
A
PLAN
SECTION A–A

Diagrams are essential for adequate accident analyses. Here danger points in pipe-laying operation are graphically shown on schematic layout. Operation consists of lowering bucket by crane into trench between braces; filling bucket by hand shovels; lifting bucket out of trench, swinging it over, and lowering it in an adjacent area; releasing catch on lip of bucket by worker to dump load; and securing catch on emptied bucket.

tion losses incurred were many thousands of dollars.

In the manufacturing field, operations are basically repetitive, so that any phase of production can be observed at any time. The operation observed today was precisely the same yesterday and will be the same tomorrow.

But in the construction industry, the constantly changing phases of operations offer an entirely different problem. To this must be added the obvious fact that no two projects are ever exactly alike even though they may be similar.

If the contractor could purchase new equipment especially suited to each project, and if he could select the site for each job to insure ideal working conditions, he could design the construction methods with a high degree of perfection on each job. But of course this is not possible.

For instance on a building construction job, foundation design can be anything from spread footings to caissons or piles. The type of framing, either steel or reinforced concrete, will affect the contractor's construction operations. The plan, size, and height of the building will vary, as well as the type of exterior—whether brick, stone, or aluminum.

Obviously many problems have to be faced before anything can be done to assist the contractor in the prevention of accidents. In the study made by the Liberty Mutual Insurance Company to determine the best way to render such assistance, it was found that the proper engineering approach depends, in great measure, on the knowledge and experience gained from association with a vast number of construction jobs.

It was discovered further that the most important fundamental of this engineering approach is the determination of potential accident locations before operations begin. As a result, what is called an "advanced analysis" has been developed.

The Engineering Approach

This involves the careful study of each phase of an operation while it is still in the planning stages, including the study of movements, structural analyses, and even the forces of nature.

The concept of the advanced analysis was developed from the study of reports of thousands of accidents and phases of operations in which they occurred. A series of steps for determining accident-producing conditions and their locations were evolved, taking into account the necessary safe flow of operations.

In general, these steps fall within two groups:

1. Study of the job during the planning stages to discover accident-producing conditions.

2. Application of the needed corrective measures as revealed by the studies.

While the equipment and materials used are reasonably common to all jobs, no set pattern for their use is followed by every contractor. Furthermore, even where two jobs are generally the same, there will always be differences in both design and method.

It follows that the accident-producing conditions will vary accordingly. Therefore, in order to discover any such conditions, a knowledge of how the operation is to be performed is necessary. The contractor's construction method and procedure must also be reviewed before preparing the study.

One of the greatest advantages of the advanced analysis method is the fact that it not only aids the contractor in laying out his work safely, but helps to reduce the tendency to evaluate the job on a day-to-day basis.

The study of recorded data leads to the determination of the accident-producing conditions. When properly carried out, these studies will clearly indicate basic accident causes. These studies are then offered to the contractor so that he can take the necessary steps to apply them to the job. He can distribute copies of the analyses among his supervisory personnel, as part of an educational program toward a logical, practical engineering approach to accident prevention.

It is interesting to note that in the past few years, this approach has received increasing interest and cooperation from our contractors.

From hundreds of advanced analyses, four basic groups of accident inducing weaknesses have become apparent.

The first general group is uncontrolled contact or interference between man and material, or between men and equipment. Obviously where conditions are static no accident will occur except, of

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Safety Helps Bring MORE AIR POWER PER DOLLAR!

—From page 19

4. Safety is regarded in AMC as a matter of cause and effect; therefore even the most minor accident must be reported and studied, in order to find the cause and prevent its recurrence—perhaps in major aspect. (Therein may lie one of the secrets of AMC's continued success in safety!)
5. Safety is a continuing, positive effort in AMC; yesterday's safety performance is not considered good enough for AMC today.

It has long been an axiom of the safety movement that any organization can have an effective safety program—*if top management wants it.* When the leaders of AMC study their grave assignment—to provide complete logistic support for the most vital arm of U. S. defense, while giving the citizen true value for his tax dollar—they realize that they cannot execute their vital mission without a good safety program.

Here, in simple and direct language, is the way General Rawlings states the management case for safety, in this directive to all levels of his command:

"Accidents give rise to substantial and serious economic losses in time, personnel and money. Most accidents can be prevented by good management in military administration and operation.

"Commanders and supervisors at all levels must adopt a strong and comprehensive Ground Safety Program and assure themselves that the program is vigorously carried out. This will involve careful examination of accident reports and accident statistics to insure that corrective action is taken wherever unsafe conditions or practices exist.

"The continuance of an effective Ground Safety Program is an essential Command requirement. I enjoin all Commanders to maintain or better the safety standards we have thus achieved."

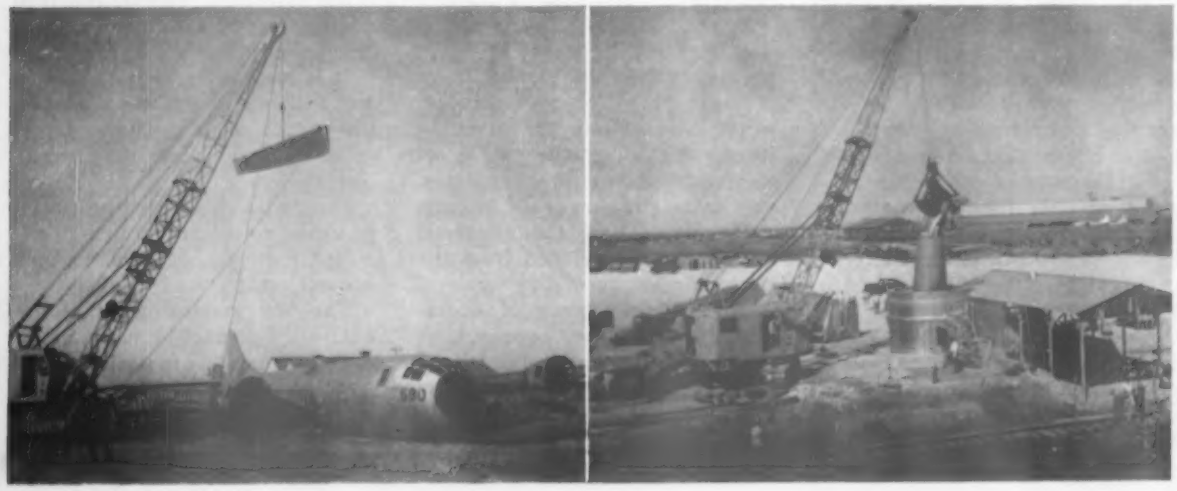
E. W. Rawlings
General, USAF
Commanding

Part and parcel of the excellent safety performance at all levels in AMC is the enlightened concept of business management that guides every phase of the vast operation—the kind of outstanding performance that would cause a glow of pride in the heart of every American. To this writer at least, AMC represents an amazing aggregation of highly developed skills and dedicated performance.

Effective Ground Safety program at every AMA and Depot in AMC is under the supervision of Col. Leonard F. Carter, Chief.

Many of the seasoned commanders in this far-flung network of supply learned the hard facts of logistical support under combat conditions, much as they learned earlier lessons of survival in flight—"flying by the seat of their pants." And though they had learned the basic facts of military strategy and administration during their early training, their new responsibilities as storekeepers for the U. S. Air Force demanded a higher degree of polish on other talents, many went to the Harvard School of Business Administration and other colleges of commerce and industry.

Salvage is an important element in cutting overall costs of Air Material Command, and some of the pennies saved add up to millions of dollars. Here (left) a massive guillotine is dropped by crane to carve up war-weary B-29 bombers, pieces of which are fed into gas-fired smelter (right) at Tinker Air Force Base, Oklahoma City, melted and sold in ingot form, at higher salvage price.



If commercial and industrial training seems a far cry from the traditional concept of the military man, just remember that these men now faced responsibilities of business management far more extensive than any previously attempted—and they also faced demands from the Congress and the taxpayers that this huge business be operated efficiently.

Any reporter of today's industrial scene, upon viewing the many facets of the Air Materiel Command operation, must suffer from a sense of frustration. He cannot possibly write about all the things he sees; things the American people would be proud to learn about. The safety editor is especially frustrated because the safety story he seeks is so completely (and properly) integrated with every phase of the whole operation. AMC just planned it that way. However, I'll try to stick to the story of the safety program.

Although I have no knowledge of what went on in Command headquarters about three and a half years ago, I imagine the Commander noted that the AMC safety performance record indicated definite room for improvement. At any rate, it was about that time that Col. Leonard Carter was put in charge of the Ground Safety Program for AMC—coming directly from the U. S. Zone in Germany and a successful record as Ground Safety Director for U. S. Air Forces in Europe.

Safety of flying personnel is extended over Mobile Bay and Gulf of Mexico by fleet of crash-rescue boats like this at Brookley Air Force Base ocean port.

The chart (Page 19), showing ground accident rates and cost in the last six years, explains why the NSC Award of Honor went to AMC for each of the last three years. The civilian injury rate, which was 7.70 for 1949, dropped to 2.20 last year. The military injury rate, which went to 10.72 in 1950, was 5.14 last year. The government motor vehicle accident rate went from 2.33 in 1950 to 0.71 last year, and the ground accident per capita cost per annum, which reached $21.94 in 1950, came down to $7.84 in 1954.

Reduction in accidents right down the line! Comparing averages for the last three years to the preceding three years, it's a telling story—civilian injuries down 47 per cent; military injuries down 40.5 per cent; vehicle accidents down 43.6 per cent, and per capita costs down 37.3 per cent!

How does Air Materiel Command achieve such a record?

Well, it seems to be the result

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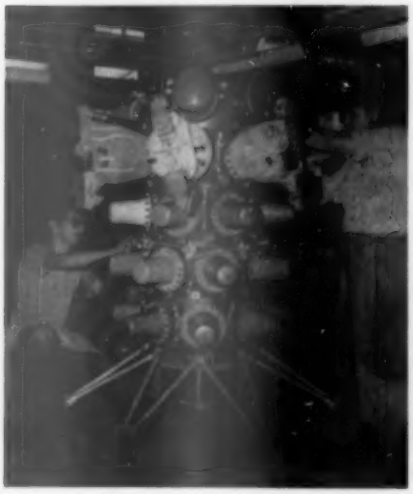
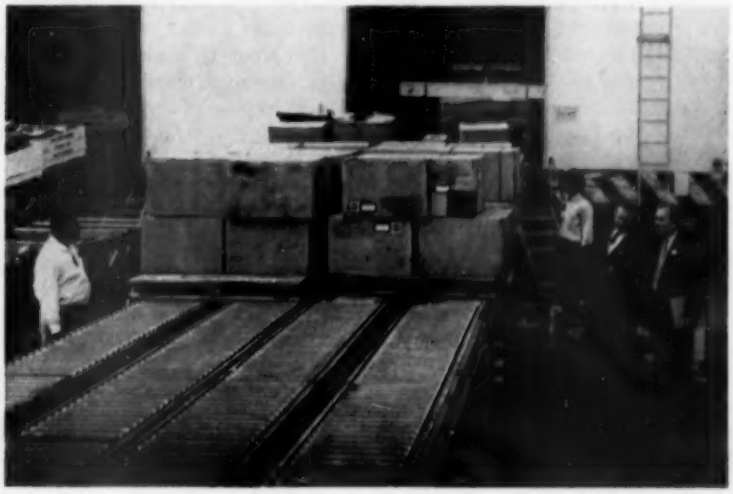
Safety of materiel is constant goal as exemplified by these temporary covers on pistons of radial engine at Kelly AFB.



Back strains and hernias are prevented, valuable time is saved by this conveyorized truck bed in use at San Antonio Air Materiel Area. Features are explained to the author (right) by Fred Keienburg, safety director at San Antonio base.



High tiering calls for extra caution. Overhead guards protect this driver from falling objects.

Your Fork Lift Trucks

. . . And the Men Who Drive Them

By WILBUR L. SHEFFIELD

THROUGHOUT industrial history materials-handling accidents have been a major cause of lost man-hours and dollars. A careful appraisal of the situation shows that any firm can prevent most of the handling accidents by establishing a definite safety program, employing proper equipment and techniques.

Most persons are aware of the safety rules that must be observed when they are on the open highway traveling at 40 and 50 miles per hour. But few know that just as rigid rules apply to the movement of materials in a plant, either by mechanized equipment or hand trucks, where speeds are less than 10 mph and all driving is done on a closed course.

A safety program for materials handling should cover these three major areas:

Techniques. The selection of proper materials handling techniques will result in greater safety by placing strains on equipment built to take the load. Better handling operations often involve increased mechanization. There is a machine to do each type of loading and moving job, each with specific safety features built in for its particular duties.

Training. Personnel should be carefully selected and trained to operate materials handling equipment. A person moving heavy loads in a congested plant area carries responsibility not only for himself and the materials he is moving, but also for the workers in his immediate area.

Maintenance. Materials handling equipment should be constantly under management's eye, just as are personnel, raw materials, and other key factors in the plant's operation. This includes a definite maintenance program and the addition of new equipment and safety devices as the need for them develops.

When choosing the proper materials handling techniques, it

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New safety device is stabilizer which hydraulically holds loose loads in place during transport.

should be remembered that back strains and hernia are responsible for a huge proportion of lost man-hours due to accidents and have been a major drain on compensation dollars. Mechanized handling removes many of the causes of these maladies.

Where handling of materials by hand is required a few simple safety rules should be followed. These include:

1. Protective clothing, such as safety shoes and gloves.
2. Safe lifting, using leg muscles, not back muscles.
3. Special precautions against projecting nails, sharp wires, and slivers.
4. Firm grip on the load, rest at intervals, and always know where you are taking the next step.

Safety features to look for in materials handling trucks include stability, operator safety guards, easily accessible and adequate brakes and controls, and proper load distribution.

Other factors to be considered are whether the fumes from gas-operated trucks will present a fire hazard and whether ventilation in the working area is adequate to remove carbon monoxide produced by the gas engine. If either of these hazards exists, an electrically operated truck with a non-volatile and non-explosive battery which does not give off fumes should be considered.

Fire prevention should always be of prime importance. Extinguishers should be kept in good condition and all drivers should know how to use them.

Job specifications determine what type of equipment is required. Size and shape of loads, how high materials will have to be stacked, whether side-loading will be necessary all help determine which machine is needed.

Just as important is the selection and training of men to operate the equipment. A machine's performance is relatively uniform and, with built-in safety features, its performance will be dependable. The human element operating the machine is the variable and requires closest control.

A formal training program for operators is a prerequisite. Both classroom work and actual driving experience is desirable. Each operator should be thoroughly familiar with the operating characteristics and be well grounded in maintenance of his vehicle. Training films and other instruction aids are available.

As a part of the training program for fork lift truck operators many firms have set up obstacle courses which the prospective drivers must negotiate with the vehicle they intend to operate. Varying conditions of load and congestion are worked into the course to simulate all possibilities the driver will face.

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The driver of a fork lift truck should always be facing and looking in the direction of travel.

Load should always be tilted against back rest before moving to bring the weight back and improve balance.

(Fiction)

The next twelve months are going to pass quickly for our safety engineer. He's promised the new boss an improvement in the accident record and the company's public relations—all in one year

In Fear And Hope

By BILL ANDREWS

August 4, 1955

THE NEW PRESIDENT, James Hay, gave me half an hour this morning. He's a new type of top brass to me. I've had the tough tyrant, the back-slapping weakling, and the old-line shop-trained production man. Hay is none of these. I suspect he is a type that is rising rapidly in modern business. About 38, quiet, polished in manner, impeccably dressed, cultured, incisive, analytical. I imagine he has an MIT background, or maybe Harvard.

He talked intelligently on the basis of my survey report, asking the right questions, listening to my explanations.

Then he picked up another document which I didn't recognize, read a moment, then put it down and said,

"The personnel survey which was made two months ago brings out an interesting point. We are not tapping to the full the labor supply suitable for our operations which is available in the neighborhood near the plant. There seem to be several reasons for that. The one that concerns you is that Exsteel has a bad reputation in the community because of frequent accidents.

"Drawing labor as we do now from distant points is a contributing factor to a high absentee rate and a high turnover rate.

"Now this adds an urgent reason for an aggessive safety program which you, of course, did not develop in your survey. I suspect that, on a cold dollars-and-cents basis, this indirect cost of our bad accident reputation is greater than the direct accident costs.

"You see, I'm giving you an additional argument with which to make your case for an adequate budget and a vigorous safety program. At the same time, I'm forced to impress on you the urgency of the matter. In your survey and your previous discussions with our people, you've taken a very conservative view of the time necessary to make substantial improvements.

"In this matter I don't feel conservative. There are several unfortunate things about Exsteel's record over the last few years, but the accident situation is certainly one of the worst. What I want from you is some assurance that you can give us improvement—quickly. And I also want from you some help in the matter of dramatizing the improvement to the community, so that our public relations can be remedied."

I replied, "I'm not a miracle worker, and I won't promise what I may not be able to deliver."

"I appreciate that," Hay said. "But isn't it possible that your estimates are made on caution and a low level of expectation based on a belief that management's backing will be half-hearted and wavering?"

"It's based on that, in part," I said. "But it's also based in part on a knowledge of just how hard it is to change the thinking of several thousand people in a plant—some of them long-service people with considerable knowledge of their work and considerable ability. Some things have to be done slowly."

He offered several things I didn't expect—an aggressive top-level participation in the safety program, a budget for staff and safety aids beyond what I had asked for, and a seat on the corporation planning board. I let the bale of hay tempt me, and I said that if these things were really implemented, I could show real results in a year. Hay expressed his pleasure—more pleasure than I felt when I thought of the day, a year ahead, when my reports would have to prove I had delivered on the promise.

Then Hay asked, "What do you need in the way of authority?"

I didn't rise to that bait. "As far as the shop floor is concerned, I don't want any. My men won't be intervening in department management. I want entry, of course, to make inspections and ask questions. But beyond that, and the right to know what changes in plant and production methods are under consideration, I don't want authority. I want influence. Mine's a staff function, not a line management one."

He asked where I wanted to be in the staff set-up. I asked that I be made responsible to the general manager. Hay's eyebrows went up, and he said, "Why the GM? Yours is a plant problem, and the general superintendent would seem the logical man for you to report to."

I explained that safety was more than a plant problem—it was also a distribution problem and an office problem. For the same reason that personnel is under the GM, I feel that safety should be.

"Also," I said, "I want it for two other reasons. One is prestige. I want to be rated a notch above plant protection and loss control. I want that because I want to be able to use influence near the top. The second reason is based on your demand on me to produce results quickly. That could, conceivably, lead me to advocate policies which your superintendent, whose principal contact

is with the top foremen, might not be eager to accept."

He thought a moment, then said. "Right. You're the GM's boy. Now, there's one other thing. The community relations angle. I want your cooperation in developing a program to sell Exsteel as a safe place to work. I suggest that you meet with Mike in public relations and—"

For the first time, I interrupted Hay. "Wait a minute. You haven't got that product to sell yet. How about giving me some time to do the job before we brag about it? Anyway, I didn't hire out as a publicity man. I'll do the job, but let somebody else beat the drums."

Hay shook his head. "I don't think you understand me," he said. "I don't wait for the plant to make a new product in quantity before I start planning the sales of the product. I want plans made now to dramatize future safety results, just as I want sales plans drawn for the promotion of future products.

"I know perfectly well that you aren't a public relations man. But you know your program, and I want you to inform public relations on its nature so that they, in cooperation with you, can plan and time a campaign properly.

"Remember this—one reason you're getting the budget and backing you are is that a community attitude destructive to the company has been built up. For the company's sake, it is necessary not only that the basis for the bad reputation be changed, but that the hangover effects of past mistakes be changed rapidly. I'm not willing to spend the money it will take and not reap the full fruits of that program quickly. So you must begin to think of the community as well as the plant, and I very much advise an exchange of ideas between you and the public relations people."

I went back to my office. Joe Burns studied my face, then said, "Boss, you look like they cut your proposed budget in half."

"No," I said. "They boosted it. Also I let Hay put me on the spot for results in a year. Also, I'm supposed to be a press agent."

I explained the interview in some detail and with some profanity.

Joe listened, solemnly, anxiously at first. Then he relaxed, and a kind of half smile began to grow on his lips. By the time I finished, he was rubbing his hands in real joy.

"Look, boss," he said. "Sure, you're on a spot, but don't you see that the really important thing is that Hay's on the spot. He's right, you know. The company's rep stinks in the neighborhood. Go out and hang around one of the bars some night. You'll hear plenty. And the women—boy, I made just one speech in a neighborhood PTA, and a couple of wives of union stewards just tore the daylights out of me in the question period. I never tried it again, not close to home."

"So," I said. "And does that help us?"

"Sure it helps," Joe replied. "When you're down, there's no place to go but up. Now, if we tackle a few very obvious things and get a couple of successes in our belt, then we go outside, not just to brag, but to get some help, some participation."

"From the barkeeps and the women?" I asked drily.

Joe snapped, "Yes, from the barkeeps and the women. Particularly the women. Suppose we go on with a few more deals like Department C (incidentally, that ruckus has paid off in good will for you) and get the housekeeping jacked up, and maybe sell that power-truck operators' training program. Then let's hit the home with a hot campaign with a heart throb angle in it—eye protection, maybe."

I thought that one over, and we batted around a couple of ideas on it. I could see its power all right. A woman certainly dreads a disability to her man. The eye angle is big enough in Exsteel to justify a major effort. If it could be tied in to a real eye survey of the plant ... if it could be handled with a film strip and poster barrage in the plant timed right with a home mailing ... if the foremen can be sold . . . it makes sense. Good sense.

I stopped short. "Why did you wait?" I asked. "Why didn't you sell this idea when you were safety director, instead of waiting for another guy to come and take the credit?"

He smiled, and there was a sadness in the smile. "I sold it—or tried to. They wouldn't listen. I don't mind now. The climate's changed, that's all. It will help my standing with you, and I'd rather be an assistant working on an active program than boss of a dead outfit. Take the idea and play it. You're welcome to it."

So I've called public relations and made a date to talk things over. Maybe it won't be just drum beating for effect. Maybe, really, I need them to help me get my job done.

Meantime, what lies ahead is at least three months of hard hitting at fundamentals — housekeeping, training, the beginning of a guarding program, recruitment of assistants, the organization of safety committees—there shouldn't be too much danger that I'll be overly concerned with the publicity.

Maybe, though I hate to admit it, Hay has seen this picture more clearly than I have.

the LIGHTER SIDE
NATIONAL SAFETY COUNCIL
HEY, MAC, DON'T EVER PET STRANGE DOGS.... ITS DANGEROUS!
D'YA THINK GLANCY'S HINTING THAT WE'RE NOT STACKING THIS STUFF RIGHT?
TIMBER!

Everyone Gets in the Act!

Here's a safety program guaranteed to bring out the "ham" in everyone

"Bubble dancer" calls attention to puncture wounds.

"Angel" reached pearly gates by leaping instead of looking.

Women workers also need safety shoes is motto here.

These actors simulate a hot-foot to warn against horseplay.

ACTING on the assumption that just about everybody is a "ham" at heart, the Safety Committee of the Memphis (Tenn.) Mill of the Kimberly-Clark Corporation recently came up with a novel method of literally getting more than 100 employees into the act.

The idea was to put on a series of safety tableaus, or skits, produced and acted out by employees—a plan combining maximum participation with dramatic presentation to make familiar safety slogans come alive.

The plan was accepted enthusiastically at a regular foremen's meeting. Next, each foreman met with his safety committee and assigned members to solicit suggested slogans from their crews. Each committee selected a slogan, decided on the method of

Injured arm dramatizes need for observing signs.

"I walked into a tractor aisle," says sign. Results are obvious.

One more reason to practice safety. Note "blood."

Artificial respiration display emphasizes value of first aid.

presentation, and procured the necessary equipment. Keen competition sprung up among all departments and shifts to produce the best tableau.

The skits were staged in an area adjacent to one of the pedestrian aisles in the plant and were conducted at shift change time for an hour, so that all three shifts could see them.

As the pictures show, a lot of originality went into the presentations. The man who played the part of an angel, for instance, had real courage. He took a lot of ribbing about it from fellow workers. The liberal use of "blood" in some of the situations added a touch of realism.

In all some 40 or 50 "actors" participated along with at least 50 more whose behind-the-scenes work went into the planning and construction of displays.

"Injured" hand clearly illustrates this woman's mistake.

The Meaning of the Label

Almost everyone accepts the UL label but few know exactly what it means and what its limits are

By NORMAN H. DAVIS, JR.

THE label of Underwriters' Laboratories, Inc., on a product is nothing but the statement ment of a private organization of engineers that the material, equipment, or device has been checked by those engineers and has been found to comply with safety requirements which those engineers believe are reasonable and properly applicable to such a product. It is not an indication of equivalence in quality or merit, nor of efficiency.

Inasmuch as this label of Underwriters' Laboratories is nothing but the evidence of the opinion of a group of engineers, how does it come to have its present wide acceptance, not only in the United States, but in many foreign countries where American products are favorably known? This acceptance comes largely from a determination to render a genuine service through the application of engineering principles to the safety of the public.

Underwriters' Laboratories, despite the many mistakes which are common to human beings, has over the past sixty years, established a confidence in its label; not by advertising as that term is commonly known, not by the direct solicitation of support or request for submittals, but by the application of sound engineering principles to the problem at hand and the effort of engineers to keep their work up to the high professional standard that one likes to think of as being typical of such a profession.

NORMAN H. DAVIS, JR., is Executive Engineer, Underwriters' Laboratories, Inc., Chicago.

During the past year two newsletters in the Sectional series carried articles that failed to give a correct interpretation of the Underwriters' Laboratories label. Since all of the National Safety Council's standard reference materials, such as the Accident Prevention Manual, data sheets and other technical materials, outline the benefits of tested and labelled equipment, we believe a thorough understanding of the meaning of the UL label is important to safety engineers.

—The Editors

★ ★ ★

It is significant that although the costs of Underwriters' Laboratories' operations come today directly from the manufacturers who submit their products and subsequently produce equipment under the Laboratories' factory inspection service, the manufacturers have no direct voice in the policies of Underwriters' Laboratories. They are freely consulted, their opinions are respectfully considered, but they cannot dictate our actions.

Likewise, electrical, building, insurance, etc., inspectors throughout the country who are charged by their ordinances with the safeguarding of electrical installations are freely consulted.

Some 300 engineers and inspectors in approximately 185 of the principal cities of the United States examine and test listed equipment, material, and devices at the factories where they are produced to determine their eligibility to bear the label. If the product is found to comply with the Laboratories' requirements, the label may be attached.

For example, a one quart vaporizing liquid extinguisher (UL will not label any extinguisher smaller than this) is picked out of the production line by a UL inspector and operated to check the working of the pump, valves, etc. and to check the characteristics of the stream. Periodically samples are refilled and stored for a prescribed period and given a final inspection for leaks in the seams, around the nozzle, and at the stuffing box.

Precautionary measures against its use in small closed areas as well as instructions concerning yearly refilling are required as part of the marking.

Originally there was no follow-up service at factories on the products which Underwriters' Laboratories examined, but it soon became evident that in an expanding industry, alert manufacturers would be obliged to make frequent changes in their product to keep pace with the advance in technical knowledge and that in order to have the original examination mean anything, it would have to be supplemented by factory examinations and resubmittals where the changes were of other than a minor character.

Summarizing this, the label on a product is evidence of compliance of this product with the Standards of Underwriters' Laboratories, Inc., and if it is listed under the Label Service and does not bear a label, it cannot be considered as having complied with UL requirements.

Reunion in Chicago

You'll meet safety's leaders at the 43rd National Safety Congress and Exposition . . . October 17-21, 1955

GALLEY PROOFS of the program of the 43rd National Safety Congress are being checked at National Safety Council headquarters. Late acceptances by speakers are being filled in and changes in original plans made in preparation for mailing the preliminary edition to members during August. Prospective delegates will thus be able to plan their time during Congress week.

And it will take some planning to take in even the highlights of the Congress. Many companies send several delegates, including operating as well as safety personnel, to cover as many sessions as possible.

In the 4½ days of Congress sessions there will be addresses—inspirational and factual—panels, work shops and skits. The topics will cover a wide range of interests—accident prevention on and off the job, occupational hygiene, first aid and fire prevention.

Highlights of the week are the All-Congress events—the Annual Council Meeting Monday morning and the Banquet Wednesday evening. Keynote addresses by distinguished speakers, a report on the year's progress, and election of officers will fill the program of the Annual Meeting. The Banquet, whose attendance is limited by the kitchen and service facilities of the Conrad Hilton Hotel, will also bring a message from a speaker well known in American public life.

* * *

Subject Sessions. Of great significance to all industrial interests are the Subject Sessions arranged by the American Society of Safety Engineers. The Annual Meeting of the ASSE will be held Tuesday morning and will be followed by the Chapter Achievement Award Luncheon.

Basic principles of safety will be presented in the Wednesday morning Session, "Safety Is a Way of Life," to be interpreted by a clergyman, an industrialist and an insurance executive.

Getting down to specific accident problems, the subject sessions will deal with:

Accident Control: (1) Administration (2) Cost
Atomic Energy Is in Industry
Safety Training—Down the Line
ASA Standard Z-16.1—The Yardstick of Safety Performance
The Human Element in Accident Prevention
Placing the Safety Engineer for Best Performance
Are Your Employees Falling Down on the Job?
Off the Job Safety—An Important Field for Management
Noise—What Is Being Done, What Can Be Done
Handle Your Chemicals and Industrial Wastes Safely
Illumination and Safety
Offices Have Accidents, Too
Effective Reporting

Throughout the many sessions held by the Council's Sectional Groups will be many papers and panel discussions on vital problems. These sectional meetings, as many members have found out, have a practical value which is not confined to the specialized groups which sponsor them.

* * *

Early Morning Sessions. By popular request, Arthur Secord, director of community service and professor of speech at Brooklyn College, will again conduct a series of meetings at 8:30 a.m. Thursday through Friday on the general theme "Communication and Safety." The four sections are: How to Sell the Safety You Know, How to Criticize Tactfully, How to Recommend and Win, and Painting Haystacks.

Rehabilitation. Of exceptional interest will be the symposium on effective utilization of the disabled employee in industry to be held Tuesday morning by the Occupational Health Nursing Section. Types of disabilities to be discussed are: the mentally ill, the epileptic, the physically handicapped, and the diabetic.

* * *

Visual Aids. Each year brings a new crop of safety movies and slidefilms to aid in the promotion of occupational, traffic and home safety programs. Some of the outstanding productions of the past year will be shown Tuesday evening. These films are winners of the 1955 awards of the National Committee on Films for Safety.

Farm Safety. Farm youth and its part in the promotion of safer farming will again be recognized. Events will include a vesper service and songfest on Sunday evening, a joint session with adults, and a youth party with square dancing.

The Safety Exposition. Much of the value of the Congress is the opportunity it gives to keep up with developments in safety equipment. There will be 186 displays all told occupying all available space in the Exhibit Hall and Annex on the lower lobby of the Conrad Hilton hotel. Exhibits will feature products, equipment and services relating to the promotion of accident prevention, health, first aid, sanitation, fire protection and general welfare.

1st Lt. George Burnett, C.O. of the 38th Explosive Ordnance Disposal Detachment, inspects projectile found in target area.

Demolition experts study a 75 mm antiaircraft artillery fuse as part of their constant training.

Duds Can Be Deadly

But men of the 38th have the know-how to handle them without mishap

Preparing unexploded projectile for detonation with a 3-minute time fuse.

MORE than three years of handling and removing sensitive, unexploded "duds" from an Army shelling range without a single man-hour lost by accident.

That's the safety record of the 38th Explosive Ordnance Disposal Detachment at Camp Stewart, Ga. This eight-man outfit is responsible for disposing of all explosive ordnance, such as high-explosive projectiles which fail to detonate after firing, that might constitute a hazard to life and property on the Camp Stewart reservation.

How was this remarkable record achieved? Detachment Commander 1st Lt. George B. Burnett, Jr. credits a combination of sound training and a knowledge of the consequences if safety measures are not followed.

"By combining every known safety precaution with a thorough back-ground of training, the men of the detachment control with confidence situations which could be extremely hazardous," says Lt. Burnett.

Added to the strong nerves, trigger-sharp reflexes, and the steady hand required of "EOD" men is careful schooling in the characteristics of explosive missiles, firing devices, and fuses. Every member of the 38th has received this instruction at the Army's Aberdeen Proving Ground in Maryland. Most of the men have also had advanced training in explosive ordnance and special weapons and devices at the Naval Powder Factory at Indianhead, Md.

The biggest explosive ordnance disposal project ever undertaken at Camp Stewart was Operation "Big Sweep," last winter, during which more than 900 unexploded shells were discovered and disposed of. These duds were either destroyed in place or removed by EOD men to a special demolition area where disposal could be accomplished in complete safety.

Thanks to "Big Sweep," more than 100,000 acres were cleared of several years' accumulation of duds, permitting troops to maneuver in safety in terrain which was normally an impact area.

DATA SHEET 372
(Revised)

FIRE-RETARDING TREATMENTS FOR WOOD

Published by National Safety Council
425 North Michigan Avenue, Chicago 11

PROBLEM

1. To improve the fire behavior of wood, particularly wood used for general construction, by means of fire-retarding treatments.

SOLUTION

2. Wood has long been recognized as a good building material with considerable fire resistance, depending upon the general type of construction and the construction details used. Heavy timber construction is slow burning and, with automatic sprinkler protection, it compares favorably with so-called fireproof construction in fire performance and enjoys favorable insurance rates. Acceptable fire resistance in wood construction is obtained by taking advantage of the self-insulating qualities of wood and by employing good structural details. Its fire resistance is also influenced by the use of protective devices, fire-resistant coverings, fire-retarding coatings, and impregnation with fire-retarding chemicals.

This Data Sheet is one of a series published by National Safety Council, reflecting experience from many sources. Not every acceptable procedure is necessarily included. Data Sheets should not be confused with American Standard Safety Codes, federal laws, insurance requirements, state laws, rules or regulations, or municipal ordinances.

Figure 1—Performance of an untreated wood attic section exposed to a 3¼ pound magnesium incendiary bomb placed in the extreme corner. A double thickness of ¾ inch wood flooring prevented the molten metal from igniting surfaces beneath the floor.

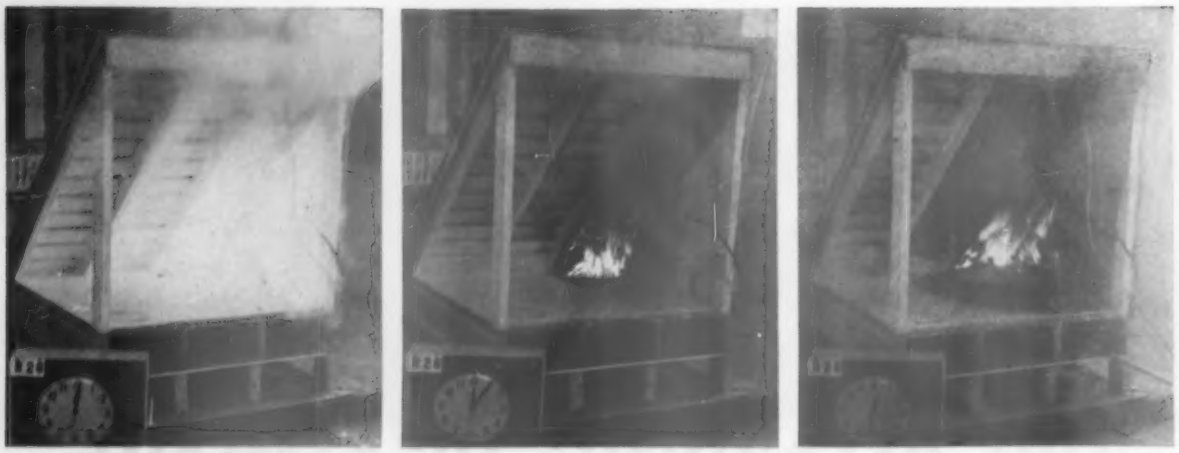

Figure 2—Performance of a wood attic section with 2 coats of a fire-retarding paint and exposed to fire of an incendiary bomb identical to that used in the section shown in figure 1. The coating greatly retarded but did not entirely prevent the spread of fire.

3. Impregnation can be made more effective than coatings. Such treatments will not prevent wood from charring when exposed to fire or fire temperatures, but they can be expected to delay ignition, sometimes even to prevent ignition, and to retard the burning and spread of fire beyond the point of ignition. Well treated wood will not continue to burn when the igniting source is removed or exhausted. (See figs. 1, 2, 3, and 4.) (10)

4. For new wood construction and the repair of existing structures with new parts, pressure impregnation with effective fire-retarding chemicals offers the best possibilities for obtaining lasting fire retardance in high degree. The major use for lumber impregnated with fire-retarding chemicals has been in building construction, such as office buildings, hotels, factories, hospitals, theaters, schools, and warehouses. Impregnated lumber is used for such items as roof decks, flooring, doors, furring, trim, lining, and sash. It is also used for miscellaneous items such as scaffolding, bracing, guard rails, and circus seats. (3)

5. For wood in existing structures, surface applications can be used to improve performance under fire exposure. Fire-retarding coatings are convenient for application to surfaces where the fire hazard does not warrant the higher cost of impregnated lumber or where the structure was erected before the need for additional fire protection was evident. The major uses of fire-retarding coatings have been in attics, furnace rooms, basement ceilings, kitchens, flues, and other locations exposed to elevated temperatures, and in schools, theaters, night clubs, department stores, club rooms, and other buildings for public gathering.

Impregnation Treatments

6. Impregnating wood with fire-retarding chemicals has only moderate effect on the resistance which wood offers to the penetration of fire. The greatest benefit from these treatments is in reducing the tendency for wood to support combustion and spread flame (5). The fire-retarding effect of impregnation treatments is dependent upon:

(a) Chemicals used

(b) Depth of impregnation

(c) Amount of chemical retained

(d) Severity of fire exposure, particularly size of fire and duration

7. The chemicals in solution are usually injected into wood by a full-cell pressure process. For a high degree of effectiveness, 5 to 6 pounds of the more effective chemicals per cubic foot of wood in thicknesses less than 2 inches are required, or approximately 400 to 500 pounds per thousand board feet. Lumber in thickness greater than 2 inches requires proportionately less chemical. Dipping, brief soaking, and superficial treatments do not usually give sufficient absorption or penetration in lumber to yield adequate fire retardance. The equipment used for impregnating wood with fire-retarding chemicals is the same equipment employed for pressure impregnation with preservatives. Lumber and plywood impregnated with fire retardants are commercially available.

8. Impregnation treatments may be complete, with the treatment extending throughout the piece, or partial, with only the outer zone of the wood impregnated. Impregnation should be as complete as possible for 2-inch or smaller members, and is necessary for lumber that is to be resawn and processed after treatment. Partial impregnation is more common, cheaper, and generally more practical than complete impregnation for timbers larger than 2 inches in minimum dimension, and if the retention is high in the outer layers, the protection is adequate for most purposes. Only partial impregnation is possible with some species of wood and with most timbers of large commercial size (8).

9. Specifications MIL-C-2865 and MIL-C-2799, available from the Navy Department, Washington 25, D. C., can be used as guides in the purchase of fire-retardant treated lumber (6, 7). The latter

provides for type M (moderate fire retardance) and a type H (high fire retardance) treatment. Two classes of treatments are provided under each type. Class 1 is based on absorption and penetration, and Class 2 on performance requirements in two fire-test methods (American Society for Testing Materials E69-50 and E116-50) (1).

10. Fire-test methods that can be used to evaluate the fire performance of fire-retardant-treated wood are described in references (1) and (12). These fire-test methods indicate comparative fire performance of treated wood specimens but have not been correlated with the performance of treated wood in structures under actual fire conditions.

11. An ASTM tentative fire-test method (E84-50T) for measuring rates of flame spread (1) is based on a tunnel furnace. Fire-hazard classifications for lumber impregnated with fire-retarding chemicals and tested by this method are given in reference (11).

Fire-Retarding Chemicals

12. The fire-retarding chemicals most commonly used include monoammonium phosphate, diammonium phosphate, ammonium sulfate, borax, and boric acid, and zinc chloride. The ammonium phosphates are effective in checking both flaming and glowing. Borax is effective in checking flaming but is not a good glow retardant. Boric acid is effective in stopping glow but is not so effective against flame. Therefore, borax and boric acid are usually used in combination. Because of cost considerations and characteristic differences of the compounds, fire-retarding treating formulations are usually mixtures of chemicals. Typical formulations are given in references (2), (3), and (6). Results of fire tests of wood impregnated with several fire-retarding formulations are given in reference (2).

13. Some chemicals protect against both fire and decay, but considerably more of the chemical must be deposited in the wood to give satisfactory protection against fire than is required to protect against decay. Chemicals that perform both functions are discussed in reference (2).

Fire-Retarding Coatings

14. Most of the fire-retarding paints have fire-retarding chemicals incorporated in a vehicle for brush or spray application (13). Some coatings contain resins or other chemicals that intumesce on exposure to high temperatures, forming an insulating layer over the painted surface. The degree of fire protection offered by fire-retarding coatings is related to:

(a) The inherent properties of the coating composition

(b) The amount and thoroughness of application

(c) The severity of the fire exposure

15. Commercial fire-retardant paints are available for both interior and exterior applications. The exterior coatings containing water-insoluble ingredients are, in general, not so effective against fire as the interior preparations containing water-soluble fire retardants. Fire-hazard classifications for fire-retarding coatings tested in a tunnel furnace are given in reference (11).

Effect of Treatments

16. Important use characteristics are permanence of the fire-retarding effect imparted to wood (6, 9), effect on strength of wood (6, 9), effect on woodworking tools (9), tendency to corrode metals (6), effect on paint (6) and glue (4), hygroscopicity, and toxicity to occupants of buildings. Some chemicals with fire-retarding properties are seldom used because they are poisonous or may have undesirable effects on the wood. The chemicals in common use by commercial treating companies, however, have had thorough trial in practice.

17. The occupational disease hazard in preparing, applying, and using fire-retardant chemicals is slight. However, protective equipment, such as rubber gloves and splash-proof goggles, is recommended when mixing the chemicals, and respirators should be worn while spraying the fire-retardant paints, particularly in poorly ventilated spaces.

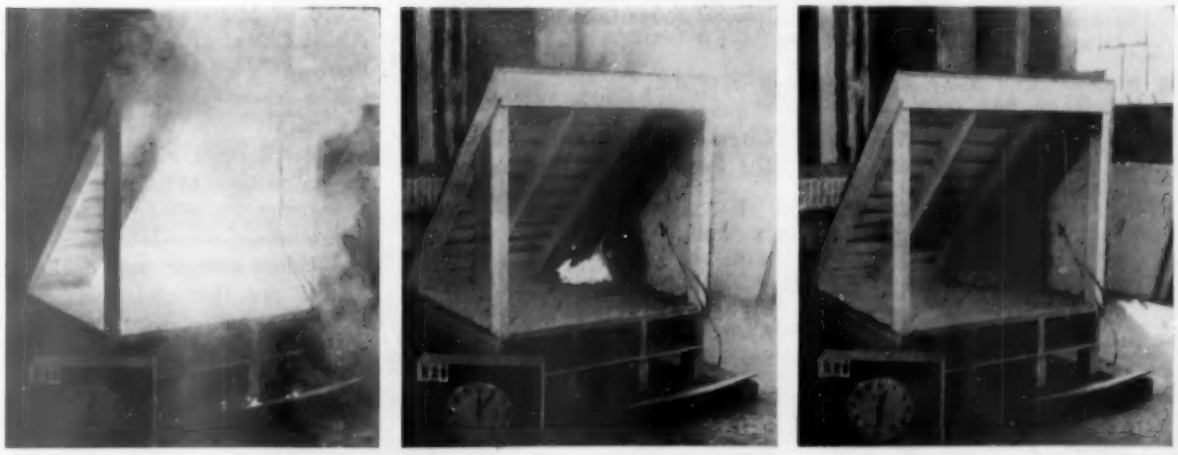

Figure 3—Performance of a wood attic section with 4 coats of the same paint used on the section shown in figure 2 and exposed to fire of an incendiary bomb identical to those used in the sections shown in figures 1 and 2. Heavier coating completely stopped fire.

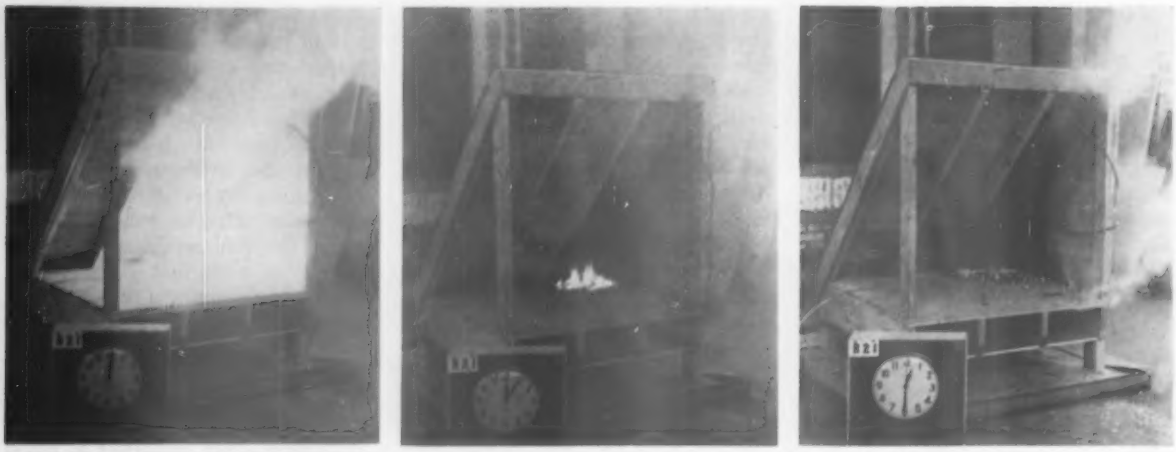

Figure 4—Performance of an attic section in which all wood members except the subfloor were impregnated with about 3 pounds of fire-retarding chemicals per cubic foot of wood and then exposed to fire of an incendiary bomb identical to that of figure 1. The treatment completely stopped the spread of fire on exposed surfaces, but the untreated subfloor was eventually ignited.

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ACKNOWLEDGEMENT

Revision of this Data Sheet was prepared by V. P. Miniutti, Technologist, Forest Products Laboratory, Forest Service, U. S. Department of Agriculture, for the Wood Products Section, National Safety Council.

Chemical Companies Win Du Pont Safety Plaques

Three chemical companies were presented with the prized Lammot du Pont Safety Plaque awards at the annual meeting of the Manufacturing Chemists' Association at White Sulphur Springs, W. Va., June 9. The awards are made annually to chemical companies showing the greatest improvement in plant safety over a five-year period.

The winner among those companies whose employees worked more than 2,000,000 man-hours annually was the American Potash and Chemical Corporation, Los Angeles.

Among firms whose workers put in less than 2,000,000 man-hours annually, duplicate awards were presented to Detroit Chemical Works and Tennessee Copper Company. Both firms showed an identical percentage decrease in accident frequency rate for the contest period.

Stauffer Chemical Company was runner-up in the over 2 million man-hour category, and Eastern Gas and Fuel Associates was second in the under 2 million man-hour classification.

The awards were presented by F. J. Emmerich, chairman of the board of MCA and president of Allied Chemical & Dye Corporation.

The chemical industry set a new all-time safety record in 1954 with lost-time accidents in the industry reduced to 3.27 per million man-hours worked, an 11 per cent improvement over 1953.

Accident severity rate declined to 0.49 per thousand man-hours worked, a reduction of 40 per cent over 1953.

The MCA safety performance report covers plants in North America representing over 757 million employee hours of exposure.

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THE SAFETY LIBRARY

Books, Pamphlets and Periodicals of Interest to Safety Men

Compiled by Ruth Parks, Librarian, NSC

BOOKS AND PAMPHLETS

Industrial Nursing

Contemporary Developments in Industrial Nursing. First Annual Workshop in Industrial Nursing, May 14-15. University of Oklahoma School of Medicine, Oklahoma City, 1955, 115 p. $1.25.

THIS IS a paper-covered, loose-leafed, metal-bound collection of the manuscripts of the two-day sessions of the First Annual Workshop in Industrial Nursing sponsored by the Industrial Section of the Oklahoma State Nurses Association, the University of Oklahoma, the Oklahoma City School of Medicine, Oklahoma State Department of Health, and Douglas Aircraft Company, Tulsa.

The subjects treated are those covering the functions of the nurse in industry and are of interest to all nurses engaged in occupational health nursing. There has been a scarcity of recent literature to be found in one volume, and while this is not a textbook, it contains a variety of material by experts in the field. Subjects include: rehabilitation of the injured, backache, pre-retirement planning, industrial relations, records, and many more of practical value to industrial nurses.

Speakers include well known authorities, such as Dr. Jean Felton; Miss Agnes Anderson, R.N., A.N.A.; Jane M. Weaver, R.N., Dr. J. F. McCahan, Liberty Mutual Insurance Company, and many others.

Jane S. Weir, R.N.

Inspectors

Guide for Labour Inspectors. International Labor Office, Geneva, Switzerland, 1955, 107p. $1.00. Available in the United States from the ILO, 1262 New Hampshire Ave., N.W., Washington 6, D. C.

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Sanitation in Places of Employment. American Standard Minimum Requirements. American Standards Assn., 70 E. 45th St., New York 17. Revision, 11p., 24.1-1955. 50c

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Index to Vol. 71 Now Available

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Health

Chromate Dermatitis from Chrome Glue and Other Aspects of the

—To page 89

ROCKWOOD ALL-PURPOSE FOAM can be used to blanket fires in alcohols, ethers, esters, ketones, as well as petroleum products.

Now... one FOAM extinguishes both petroleum and alcohol fires

New Rockwood All-Purpose FOAM does the work of two products. Simplifies training of fire fighting personnel and cuts down fire protection inventory. Rockwood All-Purpose FOAM quickly puts out fires in alcohols, ketones, ethers and similar water soluble materials as well as petroleum derivatives.

Rockwood All-Purpose FOAM reduces fire protection equipment for fire departments and plants which must deal with more than one type of fire hazard, and is ideally suited for Rockwood's SpotPROTECTION or fixed piping systems.

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Specify new Rockwood All-Purpose FOAM, put this versatile fire fighter to work for you.

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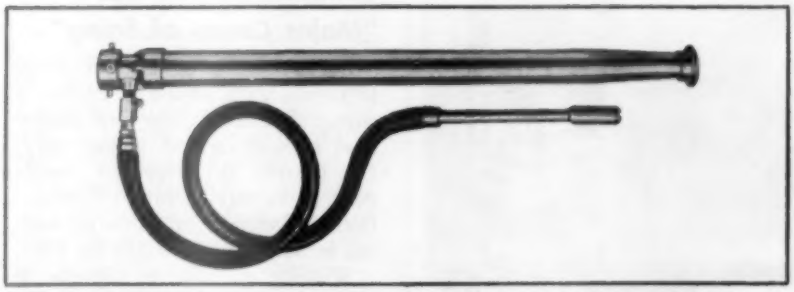
Engineers Water . . . to Cut Fire Losses



1½" STANDARD FOAM NOZZLE AND PICK-UP TUBE discharges 60 g.p.m. at 100 p.s.i. Range: approximately 55 feet.

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Please send me your illustrated booklet on Rockwood fire fighting products.

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City.....Zone..State.....

Unsinkable Boom Men

BOOM MEN at Weyerhaeuser Timber Company's Everett (Washington) lumber division are no happier about falling in the Snohomish River log pond than they ever were, but now they feel a lot more confident about floating.

During wet, windy weather the men who jockey the big sticks around the pond wear bright yellow rain coats and pants, with built-in life preservers. Inside each jacket are 28 air tubes and lining the pants are two king-size tubes. The combination makes it literally impossible for a man to sink, no matter how big his shoes or how heavy his clothing.

"We have been looking for a long time for a way to make working on the pond safer," explains Keene Strobel, Everett lumber division safety engineer. "But every sort of life preserver we tried proved bulky and awkward.

Bright and buoyant is the word for the new garb worn by boom men at Weyerhaeuser Timber Company's Everett Lumber Division. Designed to keep the wearer afloat in case of a fall into the log pond, the heavy-duty, yellow, neoprene-covered canvas jackets and trousers have inflated plastic air tubes snapped inside them.

"By buying regular rain jackets and pants, and having a local firm make the life-saving lining to our specifications," claims Strobel, "we have come up with what seems to be the answer to the potential danger of working on the pond."

Design of the new safety gear was the result of six months' trial on the pond by boom men. The inflatable air tubes are fastened to the inside of the rain clothing with snaps.

Life preserver equipment is also worn by boom men at Weyerhaeuser's Springfield, Klamath Falls, and Coos Bay branches in Oregon and at the White River branch at Enumclaw, Wash.

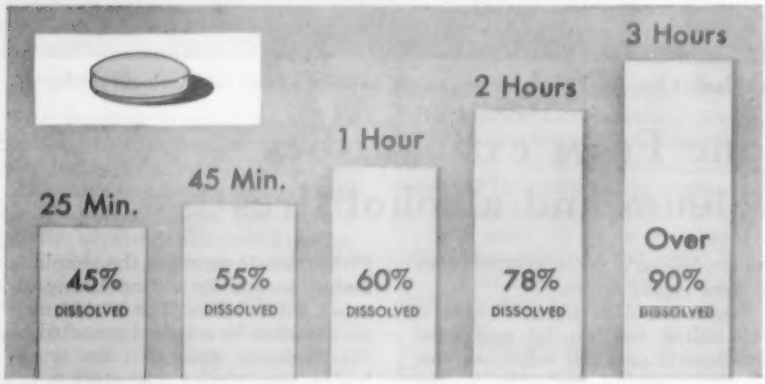
Combustion Methods "Major Cause of Smog"

IMPROVEMENT of combustion processes as a means of reducing smog, should be "the first major goal of science and technology," Dr. Lauren B. Hitchcock, president of the Air Pollution Foundation, declared in an article appearing in *Scientific Monthly* for July.

Writing on "Some Aspects of the Urban Air Pollution Problem," Hitchcock and Helen G. Marcus, editorial assistant with

Controlled dissolving action is the reason Morton Impregnated Salt Tablets give fast relief—without nausea

This chart shows the controlled dissolving rate of a typical Morton Impregnated Salt Tablet



Within minutes, the average person begins to feel better, work better, when he takes Morton Impregnated Salt Tablets. For as soon as the tablets are taken, essential body salt lost through perspiration begins to be replaced—but at a gradual rate, so as not to cause nausea.

For more than three hours after Morton Impregnated Salt Tablets are taken, they continue to fight heat fatigue by supplying salt. Careful, uniform coating of the salt crystals in each tablet results in controlled dissolving action—the reason Morton Salt Tablets give such excellent results.

Morton Yellow Impregnated Salt Tablets come in a handy, disposable dispenser. Plastic and heavy-duty aluminum dispensers are also available, as are plain salt tablets.

Place your order this week with your local safety equipment distributor. If he cannot supply you, write:

MORTON SALT COMPANY
Dept. NS-8, 120 South LaSalle Street
Chicago 3, Illinois

Complies with Federal Specifications SS-S-31e for Type III, Class C Impregnated Salt Tablets
U. S. Patent No. 2,665,236
Patented 1954 (Canada) No. 501,316

the Foundation, and co-author, emphasized that currently inadequate combustion methods are a major cause of smog.

"As our cities expand, more public and private transportation is needed, which means more motor vehicles and increased power requirements," the article explained.

"Virtually all machines require power produced by a combustion process. Our present combustion processes are all very imperfect and contribute by far the major part of man-made pollution.

"There is mounting evidence that organic compounds from combustion react in the presence of oxides of nitrogen and sunlight to produce oxidized organic compounds and ozone; that some of these organic oxygen complexes may be responsible for eye irritation, plant damage, reduced visibility and bad odors."

The article, in addition to presenting the views of the authors, represented a summary of the main points contained in six technical papers presented last December 30 at a Symposium on Air Pollution conducted by the American Association for the Advancement of Science at its 121st annual meeting at Berkeley.

"The growing concentration of men and machines evolving new processes and products is responsible for nuisance—and even hazard-carrying pollution, which must be corrected if urban civilization is to continue," they wrote.

The authors warned that much preparatory work still needs to be done before adequate remedies for air pollution problems can be prescribed:

"We must analyze the air to identify the pollutants and their sources, to understand the changes which take place in the air. We must equip ourselves for this research. Work done to date has only indicated the magnitude of the problem ahead of us.

"After we familiarize ourselves with the air around us, we must invent practical remedies to combat pollution. In the absence of these, legislation can do little towards the improvement of pollution conditions."

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200 MAN HOURS SAVED

in busy production Schedule

● If the conveyor in your paint drying oven jammed would it mean shutting down the oven for 24 hours to let it cool and result in sending 20 employees home? Or could you do as this progressive company did—equip a man with a Scott Air-Pak and asbestos suit and get him into the oven at 320° to make the repair in 10 minutes? A similar, costly interruption *could* happen in *your* plant tomorrow! 200 Man Hours is a lot of time to lose in a busy production program. Better take steps now to get on that 10 minute schedule!

On Hazardous Jobs Scott Air-Paks Help Management and Labor Breathe Easier

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How Safe Are Blind Machinists?

BLIND machinists are operating machine tools, producing accurate work, and working at least as safely as their sighted companions.

Dr. Clifford M. Witcher, of the Massachusetts Institute of Technology's Research Laboratory of Electronics, presents evidence to support this statement in an article in *American Machinist* for March 14, 1955.

Only the blind person who has lived with this problem long enough to achieve self confidence, long enough for his other senses to compensate for the lack of sight, can appreciate how little danger results from his blindness in tasks that he has been trained to fulfill, says Dr. Witcher. Perhaps one reason employers hesitate to hire a blind person is that they have never been blind. Because the employer depends upon his own sight, he cannot believe that anyone else can function normally without sight.

Dr. Witcher reports on the experience of a group of seven blind men who completed a thorough course in basic machine shop practice at the Waltham Trade School, Waltham, Mass., and the record for this course is entirely free of accidents.

These men, of course, cannot be classed as "machinists" in a specific sense recognized in the industry but there is no reason, now, why they may not continue their training and experience until they reach that level.

Every one of the seven men can operate all of the basic shop machine tools. Very little modification is necessary on the machine to make this work possible. Others before them have become proficient mechanics, even without the benefit of such a systematic basic course.

The man largely responsible for the conception and organization of the course is Robert Scott, totally blind placement counselor, with the Massachusetts Division of the Blind. Although not a machinist, Scott had some experience in working with power tools and also knew of numerous examples of blind workers in industry.

Employment of blind workers in routine shop operations, such as assembly, drill press work with standard jigs, punch press operation, and various kinds of manual feeding tasks, is not new. However, the Massachusetts training experiment and the result obtained went far beyond this level.

The instructor, James Westall, was an experienced teacher of machine shop practice to students with normal sight but he had no experience in working with the blind. Before the course he conferred frequently with Mr. Scott and others who could help him acquire the specialized knowledge needed for the program. His attitude toward students was an admirable combination of kindness, common sense, firmness, and a business-like application to the job.

The seven students were selected on the basis of job needs and general qualifications from the State division's roll of blind clients.

The only special tools used by the students were micrometers modified for touch reading and "rotomatic" depth gauges, the latter to permit length measurement up to 12 inches with an accuracy of 1/64 inch or better.

Manpower needs during World War II brought many a handicapped person into industry where they proved to be productive and safe workers. This sightless employee is operating power-driven equipment. The seeing-eye dog is also wearing an identification badge.

At the time, the American Foundation for the Blind was out of stock on its standard touch-reading micrometers so the machine shop of the Research Laboratory of Electronics at MIT produced them.

Only two modifications were made on the shop machinery. An extension shaft was attached to the bench grinder so that a blind student could tell whether or not it was running in the midst of shop noise, simply by touching the shaft. Raised markings were added to the micrometer stops on the lathe.

There was no need to provide raised markings on the feeds of lathes, milling machines, grinders, etc. By appropriate use of the modified micrometer and depth gauge, plus a feeler gauge and a few pieces of shim stock of known thickness, students had adequate knowledge of tool and work relationships.

After they had learned the "feel" of each machine, students were able to estimate with fair accuracy just how many thousandths of an inch they had moved a feed.

Some work on practically every machine in the shop was included in the course, plus practice at shop calculations. Machine tools included lathes, drill presses, milling machines, shapers, bench grinders and band saws. Students produced usable items such as screw drivers, ball peen hammers, bench blocks, and even tool makers' clamps, all of which they were allowed to keep when the course was finished.

One reason for low accident rates among blind manual workers was explained by Dr. Witcher. A blind person's hands are his most precious possession. Thus, before he begins to work with any tool or machine, he'll note with greatest care the location of all danger points and will make sure that his hands do not approach too close to these points. Also, he is extremely careful to keep the work area neat and uncluttered, with every tool in its proper place.

Education does not mean teaching people to know what they do not know; it means teaching them to behave as they do not behave.
—*John Ruskin*

Alaska to Hold Ninth Safety Conference

Representatives of the Armed Services and other federal agencies, local and territorial officials, and representatives of private industry will take part in the Ninth Annual All-Alaska Accident Prevention Conference to be held in Fort Richardson, August 8 through 12.

On the program of the opening session are Major General James F. Collins, Commanding General, United States Army, Alaska; Hon. B. Frank Heintzleman, Governor of Alaska, and Ned H. Dearborn, president, National Safety Council. In addition to sessions covering a variety of topics on occupational and motor vehicle safety, a motor vehicle roadeo will be held with competition for various types of vehicles.

HOOD *Lightweight* Industrial Gloves — For Jobs where "Touch" and "Feel" are important

No. 8000 gauntlet, for light industrial use. Working hands are protected but still sensitive to "touch" and "feel". It's coated with natural rubber; net-lined so that rubber doesn't touch the hand. A special rough surface assures firm grip. Small, medium, large sizes.

Write for free catalog — shows the RIGHT Hood neoprene, rubber or plastic coated glove for EACH job.

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RUBBER - NEOPRENE - PLASTIC COATED INDUSTRIAL GLOVES

GREEN CROSS NEWS

Activities of Local Safety Councils and Chapters

By TOM A. BURKE, Assistant Director, Western Region, NSC

Milwaukee Foremen's School

More than 11,000 employees of 300 Milwaukee business firms attended the recent Milwaukee Foremen's Safety School sponsored by the Industrial Safety Division of the Milwaukee Association of Commerce. This famous supervisor's school has been conducted each year for the past 35 years. Undoubtedly it has been an important factor in reducing occupational deaths and injuries in the metropolitan Milwaukee area to less than 50 per cent of the national level.

This year's series consisted of three sessions a month apart, each consisting of eight sectional meetings followed by a general assembly. Closing session was held May 17.

A "Ring of Safety"

As a novel feature of the Eastbay Chapter's 1955 financial campaign, conducted through May and June, 1,000 women from Oakland and other Eastbay cities organized a "Ring of Safety."

Under the direction of the Women's Division of the Chapter, most of the important women's groups, housewives, Business and Professional women and others were enlisted to make telephone appeals throughout the week of June 12.

The objective was to sign up 10,000 families to contribute "$1 or more" for membership in the Chapter. It was also planned to have reflective bumper emblems placed on 10,000 automobiles in the area.

This year's campaign, under the able chairmanship of Henry J. Kaiser, Jr., gave wide circulation to a convincing mailing piece. The child appeal was used this year and the very appropriate caption was "Slow Up So They Can Grow Up!"

Current goal is for $72,000 and at the time of going to press, the drive is progressing on schedule.

Tri-City Conference

The Eastern Pennsylvania Safety Conference has the unique distinction of being held in three cities instead of one, as is customary. The Conference has grown in size and importance during recent years so that it is advisable now to stage it in the heavily industrialized "tri-cities" of Allentown, Bethlehem and Easton.

This year's big meeting, on May 2, 3 and 4, was the 28th annual session and a large attendance was reported by Secretary-Treasurer Harold R. Seward of the Lehigh Valley Safety Council which sponsors the Conference. More than 1000 persons attended the banquet, held at Moravian College, Bethlehem, May 4. Dr. Ralph Casper Hutchison, president of Lafayette College, was the speaker. Harry N. Crowder, president of the safety council, presided.

Bans Kerosene Stoves

The Baltimore Safety Council reports a decrease in home fatalities involving kerosene stoves since the adoption of an ordinance by the city council outlawing the use of such stoves. The official action followed a noticeable increase in kerosene explosion tragedies in Baltimore and elsewhere. Manager John Rostmeyer of the Council reports that the rather drastic ordinance has attracted a lot of attention in Maryland, New York and other Eastern States. Michael Pendergast, New York State Safety Director, has an article about the new ordinance in the Department of Health *Bulletin*. Several news commentators have also called attention to the ban.

Junior Achievement

In the annual report of the Hamilton County, O., Safety Council's Industrial Division, Chairman Robert O. Stephenson pointed out that one of the "extra jobs" performed by the committee during the year was the development and handling of a special safety program for the newly formed Junior Achievement projects in local companies. The committee established some original ideas that may be used by other Junior Achievement programs throughout the country.... The safest year in Hamilton's industrial history was recorded in 1954. Seventy-eight industrial members reduced their 1953 frequency records and 56 of them had perfect no-accident records for the year.

Portland Patrols Honored

The City of Portland, (Ore.), recently observed the 30th anniversary of the organization of its Junior Safety Patrol. During the past three decades there have been no fatalities to school children at crossings supervised by the patrols and only nine accidents have occurred. Seven children were injured and two resulted in property damage only.

On June 4, 4500 youngsters were guests at an all-day outing at Jantzen Beach. Oregon's governor, Hon. Paul Patterson and Mayor Peterson of Portland were special guests of honor and spoke to the group.

The youthful patrols direct Portland pupils safely at 340 supervised crossings. The city does not employ any adult guards for school work.

Playground Safety

The Lansing Safety Council's School Safety Committee has published and distributed a folder giving a complete list of all playgrounds in the Lansing area along with a listing of the school and public swimming pools, with open-

ing and closing dates, hours, etc. The council committee works closely with the Board of Education and the city Recreation Department in protecting Lansing youngsters during the summer.

Plans Year-Round Programs

A "Citizens for Safety" Committee was recently formed in Phoenix, Ariz., at the suggestion of Mayor Frank G. Murphy. The official committee is composed of 15 immediate past presidents of leading civic clubs in Phoenix and representatives of the public and parochial schools. The purpose is to coordinate and initiate traffic safety educational programs within the City. It was brought out that civic clubs have done a fine job through the years in public safety but for the City of Phoenix to maintain its record in traffic safety in its population group, greater energies must be expended.

In past years various clubs would work on different projects at the same time and then in following months no projects would be carried on. A first objective is to coordinate these programs so there is continuous effort, with separate activities each month sponsored by one of the major civic organizations.

Editorial Lauds Council

Because of its application to organized community safety programs in all parts of the nation, the following editorial from the Benton Harbor, Mich., *News Palladium*, Stanley R. Banyon, editor and publisher, is reprinted in its entirety:

The Twin City Area Safety Council has embarked upon another year of activity and service following an annual meeting at which present officers, directors and executive committeemen and women were reelected.

The Council continues to broaden the scope of its safety and accident prevention work in industries, schools, homes and on the highways.

The local unit has again won recognition by the National Safety Council, and national citations have come to the cities of Benton Harbor and St. Joseph and the Benton Harbor schools for their outstanding achievements.

Some of the longest strides were taken last year in organizing women's groups and teaching accident prevention in the homes.

Hundreds of safety education meetings have been planned and carried out by all divisions of the Council.

Although efforts are at times discouraging, safety campaigns such as are organized by the Councils of the nation are bringing down the accident rate in homes, factories, on the beaches and elsewhere. It has succeeded, less well, nationwide, in reducing the traffic toll that last year took over 35,000 lives, but it is waging a continuing battle.

Accident prevention means billions to the nation in savings through less work time lost, less hospitalization and fewer medical bills not to mention productivity.

Safety Councils can't operate on dedication, enthusiasm and work alone. To function they must be financed, and financing comes chiefly from individual and association contributions, industrial donations and municipal appropriations.

One thing is sure—money invested in accident prevention and safety brings tangible results in hundreds of ways. It is an investment in community progress and in human life.

On a limited budget, the Twin City Area Safety Council has achieved the enviable reputation of being one of the best in the entire United States.

Now-Performance Extras

never before available in a welder's glove

Yours with WELDTAN* Leather

*A new super-chrome tanned side split leather tanned only by General Split Corp. World's Largest Producer of Glove Leather Splits.

Welders' gloves that give you important extras are now made possible with General Split's new *WELDTAN*. You get more heat resistance and softness than with even a horsehide split, *more abrasive and tensile strength than any leather has ever had before.* And all of this is yours for just slightly more than you'd pay for an ordinary glove.

This best-of-all leather is especially tanned to stand-up under rough going — particularly high temperatures. Besides having *greater thermal resistance*, it also has a *higher shrink temperature*, and offers superior comfort and *softness*. Your men will appreciate these features even more than you'll like the longer wearing qualities.

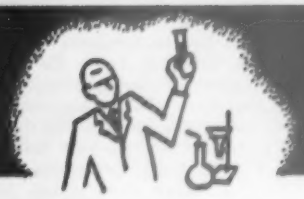
Make sure you get this *extra performance* that spells out ECONOMY in the next glove you buy. Gloves made from General Split's *WELDTAN* leather are available from *all reputable glove manufacturers* and safety supply houses. You can readily identify *WELDTAN* leather by this identifying label attached to every pair.

GENERAL SPLIT CORPORATION — FIVE STAR QUALITY

World's largest producer of glove leather splits

730 West Virginia Street, Milwaukee 4, Wisconsin

INDUSTRIAL HEALTH



Abstracts of current literature on Industrial Hygiene, Medicine, and Nursing

BY F. A. VAN ATTA
Industrial Department, NSC

Traffic Noises

They Are Doing Something About Noise, Noise Measurements of Motor Vehicles, by W. Furrer. Noise Control, Volume 1, No. 3, pages 39 and 40. (May 1955.)

IN SWITZERLAND there has been a great increase in the number of motor vehicles in the past ten years and the noise produced, particularly by motorcycles, bicycles with motors and motor trucks is a cause of considerable annoyance. The Swiss legislation about motor vehicles prohibits the development of excessive noise without specifying any methods of measurement or any numerical maxima about which the noise should not be permitted to develop.

Fixing of numerical limits for noise of motor vehicles is complicated by the fact that the reason for noise reduction is annoyance rather than production of any physical disability and the annoyance is not necessarily related to the loudness level. The quality of the sound has a great deal to do with the annoyance produced. The high pitched whine of a small bicycle motor, for instance, is generally considered to be more annoying than the substantially louder but lower pitched sound of a large motor.

It would seem possible to devise a sound level meter with increased sensitivity at the frequencies between 1,000 and 3,000 cycles per second which produce the most annoyance, but a trial of this type of equipment proved that it did not work very well.

The Swiss traffic office has set up a series of maximum permissible sound levels for different categories of vehicles as a practical control. These levels are 80 decibels over-all for passenger cars or motor equipped bicycles, 85 decibels for two stroke motorcycles, 90 decibels for four stroke cycle motorcycles, and 90 decibels for trucks and buses.

The sound levels are measured with a standard sound level meter placed at a distance of seven meters (23 feet) lateral to the vehicle in an open field and with the engine operating at full power. Vehicles with gasoline motors are measured on a test stand which permits them to be operated at full power while vehicles with Diesel engines generally have governors and can be operated at full power without a test stand.

Gasoline powered cars and trucks generally have noise levels below the permissible maximum and do not require testing except for the noisy exceptions which usually can be recognized without any formal tests.

Packinghouse Wastes

The Anaerobic Contact Process as Applied to Packinghouse Waste, by George J. Schroepfer, W. J. Fullen, A. S. Johnson, N. R. Ziemke and J. J. Anderson. Sewage and Industrial Waste 27:460-486 (April 1955).

THE PILOT PLANT tests on the anaerobic treatment of packing plant waste have been carried on at the George A. Hormel & Company plant in Austin, Minn., since 1950. For the past two years the American Meat Institute has contributed to the carrying on and study of the pilot plant research.

During this time the process has been developed which is capable of removing 95 per cent of the five day biological oxygen demand and 90 per cent of the suspended solids at loadings of packinghouse waste up to 0.2 pounds of biological oxygen demand per cubic foot of digester per day.

These removals require a detention period in the digester of less than 12 hours based on the raw flow, and less than 3½ hours based on the total flow (raw flow plus sludge returned to the digester).

As compared to the conventional aerobic processes, this process can operate at up to four times the sewage digestion with equal quality of product.

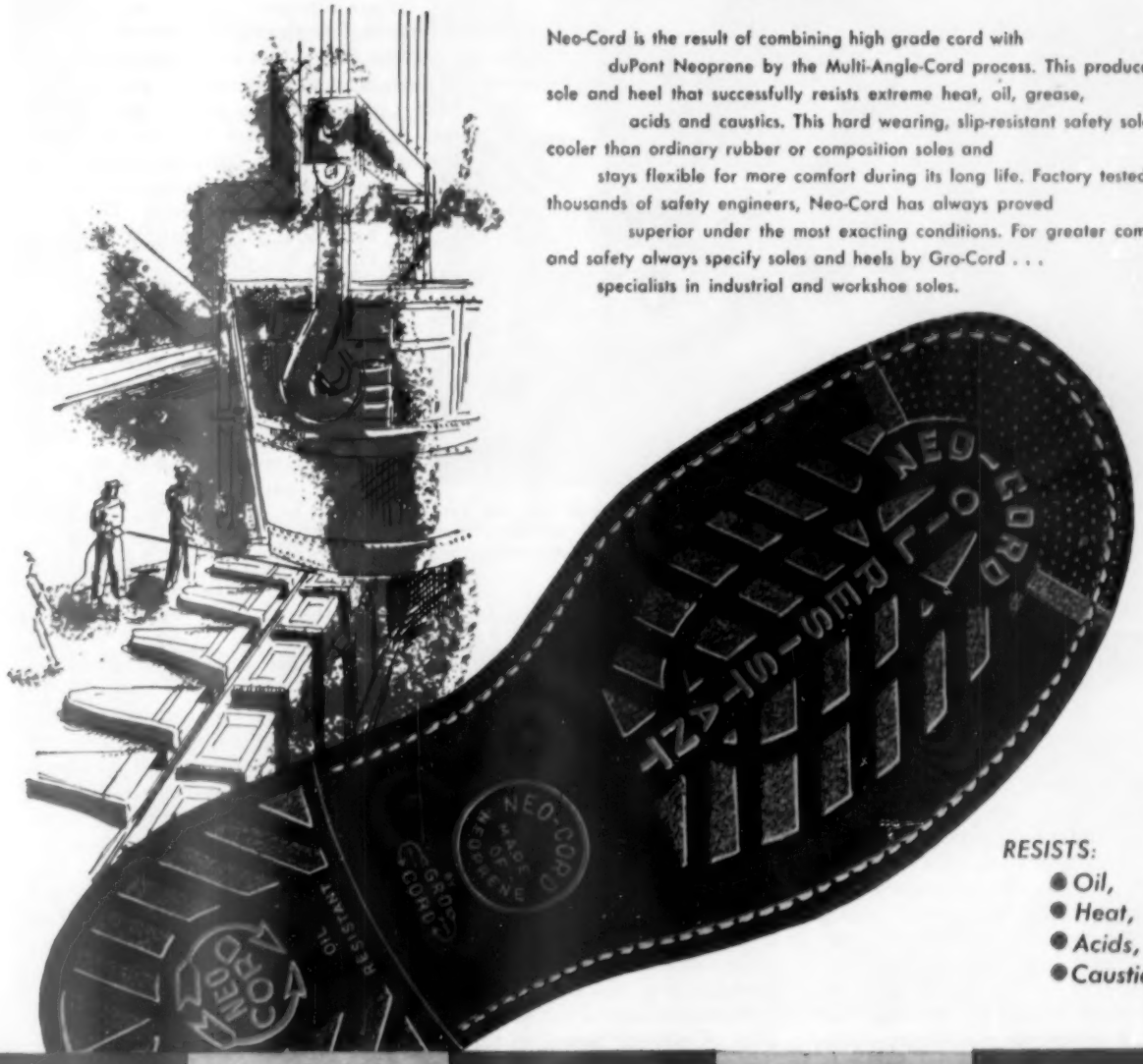
The essential part of the process appears to be contact between the biologically active sludge and the raw waste and the new method has been called an anaerobic contact process. It could be referred to as the anaerobic activated sludge process.

The flow diagram of the process is not unlike that of the activated sludge plant. The anaerobic process gets better results at higher loadings partly because of the fact that it can operate at a higher temperature and partly because the suspended solid can be maintained five to seven times higher than in the conventional activated sludge plant, permitting more intimate contact with the raw waste.

One significant difference of this process from other anaerobic methods of digestion is the vacuum degassing of the suspensions before the solids are separated. This results in consistent effective separation of the solids from the liquids to the extent that the

—To page 70

cool feet in HOT spots



Neo-Cord is the result of combining high grade cord with duPont Neoprene by the Multi-Angle-Cord process. This produces a sole and heel that successfully resists extreme heat, oil, grease, acids and caustics. This hard wearing, slip-resistant safety sole, is cooler than ordinary rubber or composition soles and stays flexible for more comfort during its long life. Factory tested by thousands of safety engineers, Neo-Cord has always proved superior under the most exacting conditions. For greater comfort and safety always specify soles and heels by Gro-Cord . . . specialists in industrial and workshoe soles.

RESISTS:

- *Oil,*
- *Heat,*
- *Acids,*
- *Caustics*

"Sell 'em the shoe with the Sole for the job"

Gro-Cord offers the only complete line of industrial workshoe soles that enable you to assure workmen of greater satisfaction through comfort—safety and longer wear, regardless of job conditions. Get acquainted with the complete line of Gro-Cord soles and heels, today!

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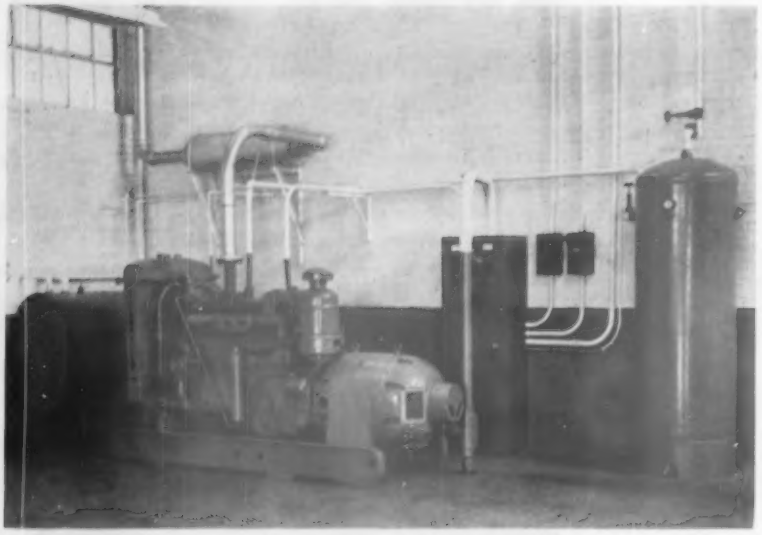
No Blackout When Power Fails



Should an emergency power failure occur at the Denver plant of Shwayder Bros., this Caterpillar D326 Diesel electric set automatically picks up the load on an emergency circuit which powers critical lights and motors throughout the plant.

"WHAT WOULD HAPPEN if employees working near high speed equipment should panic during a power failure blackout?"

This thought occurred to an official of Shwayder Brothers, Inc., makers of Samsonite luggage, as he was standing in the Denver plant one night when a power failure darkened the entire plant for a few minutes.

Of course, the high-speed machinery would lose power during the stoppage—but a whirring circular saw blade doesn't stop immediately. A person groping in the dark could be severely injured on nearby machinery—particularly if he were hurrying to leave the building.

The result was a plan providing for standby electric power to operate critical lights and motors during a blackout, thus avoiding the possibility of anyone getting hurt in a panic which could be set off easily among several hundred employees in a darkened building.

After thorough investigation, it was decided to obtain a diesel standby generator unit. In August, 1953, Shwayder installed a 90 KW Caterpillar D326 Diesel electric set. Special circuits were run off of this generator for the critical lights and heating facility motors. The 220-volt, 3-phase generator provides the full 220 volts to the critical motors and 127 volts to the lighting circuits.

The engine was installed with a special automatic air starting device designed by Electric Equipment and Engineering Company of Denver whereby the engine would automatically provide a full power load to the emergency circuit within five seconds after a power failure. The engine is pre-conditioned with 60° water circulating in the cooling system.

It doesn't take a complete stoppage of electric power to turn on the engine. A failure on any of seven key circuits throughout the plant will automatically start the engine and provide power to all lights and motors on the emergency circuit. These seven circuits are so wired that if one of them were completely taken out, as by an explosion, the diesel could still provide power to the rest of the plant.

The special circuits provide light and heat in the plant where employees might be idled for some time by a power failure. No manufacturing machinery can be powered off the standby equipment.

Floodlights on the emergency circuits are placed in any location where employees might be during a blackout—in the manufacturing area, in the medical room, in halls, on stairs, in rest rooms, offices, cafeteria, and outside all plant exits. This lighting circuit is a safeguard only against a failure during the night shifts. The plant has adequate natural lighting during the day.

When power is cut off, whether accidentally or purposely, the lights come on immediately. However, in the boiler room circuit, the motors powering the fuel pumps and blowers must be turned on manually so that when the man on duty goes to each engine and presses a button to start it he is assured that the heating plant engines are running.

In almost two years there have been only three or four minor failures of the primary power source. None of these was of more than a few minutes' duration.

However, the Cat engine has been more than just insurance for a prolonged outage. It has been put to considerable use because of expanding plant facilities. During the last two years expansion has meant rewiring, new transforming capacities, changes in power distribution, etc. This work must be done at night after manufacturing facilities are shut down.

The engine is turned on, the circuit shut off and the repairmen have adequate light from the emergency circuit, without extensions or portable lights.

The only machinery which operates off the standby engine is in the maintenance department. Here repair tools, such as drill presses, grinders, etc., are wired to the standby circuits so that repair work can be completed quickly. The motors operating the large overhead doors are also hooked into the emergency circuit in order that equipment can be moved in or out and also so employees will have a better exit from the plant should the need arise.

Air Casualties

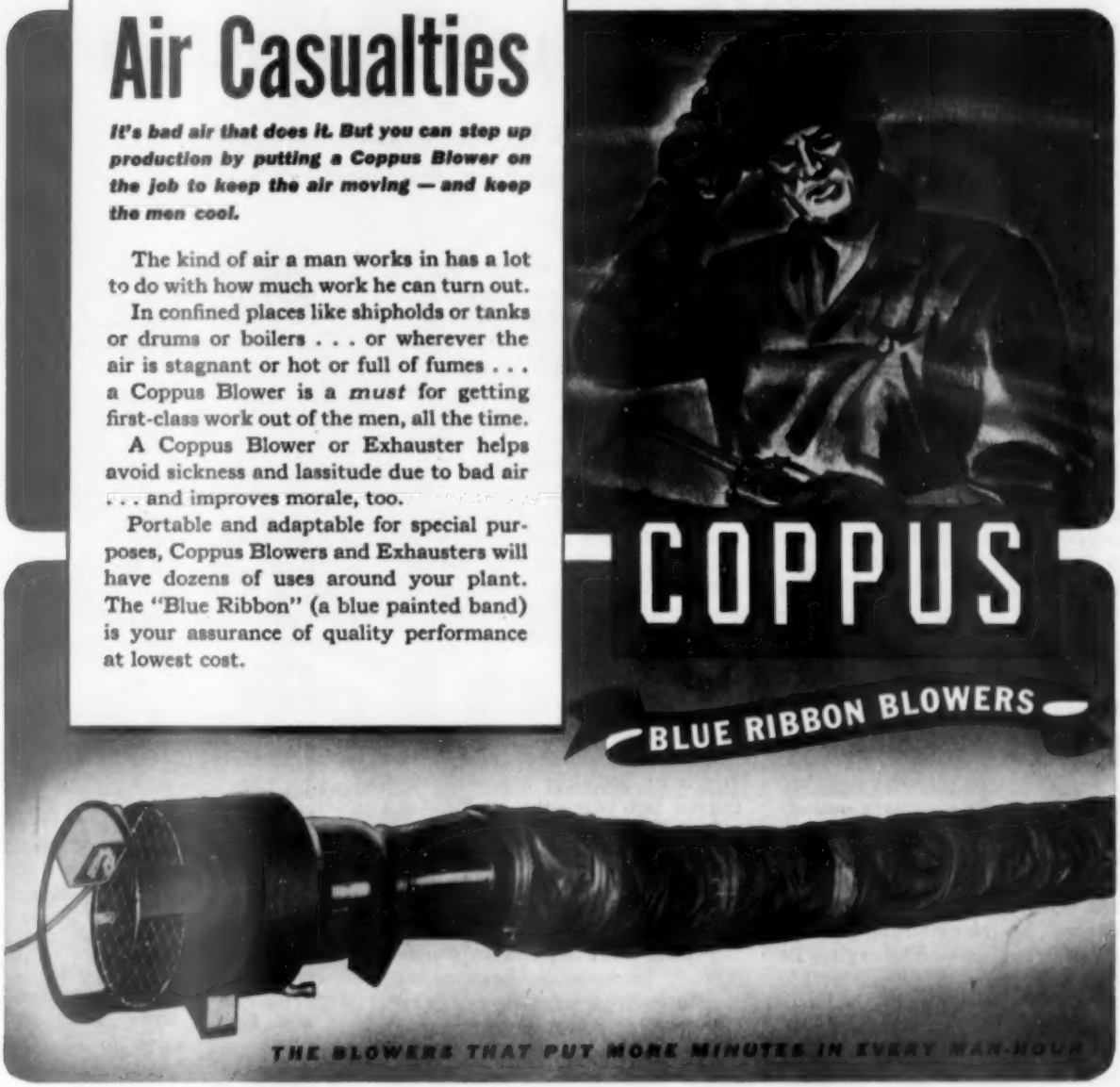
It's bad air that does it. But you can step up production by putting a Coppus Blower on the job to keep the air moving — and keep the men cool.

The kind of air a man works in has a lot to do with how much work he can turn out.

In confined places like shipholds or tanks or drums or boilers . . . or wherever the air is stagnant or hot or full of fumes . . . a Coppus Blower is a *must* for getting first-class work out of the men, all the time.

A Coppus Blower or Exhauster helps avoid sickness and lassitude due to bad air . . . and improves morale, too.

Portable and adaptable for special purposes, Coppus Blowers and Exhausters will have dozens of uses around your plant. The "Blue Ribbon" (a blue painted band) is your assurance of quality performance at lowest cost.



CABLE MANHOLE AND TANK VENTILATORS — BOILER MANHOLE BLOWERS AND EXHAUSTERS — HEAT KILLERS — SHIPHOLD VENTILATORS . . . DESIGNED FOR YOUR INDUSTRY — ENGINEERED FOR YOU

MAIL THIS COUPON To Coppus Engineering Corp., 128 Park Avenue, Worcester 2, Mass. Sales offices in THOMAS' REGISTER. Other "Blue Ribbon" Products in BEST'S SAFETY DIRECTORY.

PLEASE SEND ME INFORMATION ON SUPPLYING FRESH AIR TO MEN WORKING:

- ☐ in tanks, tank cars, drums, etc.
- ☐ in underground cable manholes.
- ☐ in aeroplane fuselages, wings, etc.
- ☐ on coke ovens.
- ☐ on steam-heated rubber processes.
- ☐ on boiler repair jobs.

COOLING:

- ☐ motors, generators, switchboards.
- ☐ wires and sheets.
- ☐ general man cooling.
- ☐ around cracking stills.
- ☐ exhausting welding fumes.
- ☐ stirring up stagnant air wherever men are working or material is drying.
- ☐ drying of walls, sheets, etc., after treated with coating material.

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COMPANY .....

ADDRESS .....

CITY .....

(Write here any special ventilating problem you may have.)

They're Safer in Coshocton

The accident prevention program in the local General Electric plant has produced important by-products in the community's life

SAFETY thinking by management and safety training on the job are valuable assets to a community, as has been shown by the experience of many an industry. The person who has been trained to think of safety while at work is more likely to avoid accidents off the job.

This has generally been accepted in safety circles, even though supporting statistical evidence has been rather meager. Now some new statistical data emphasizes the value of this important by-product of accident prevention training.

General Electric Company is known as a "community conscious" organization. When establishing a new plant, G-E executives are not concerned solely with the obvious primary considerations of strategic location, labor availability and other economic factors. They want to know, too, that the plant justifies its existence by contributing to the general welfare — discharging its responsibilities as a good neighbor. They want a safety program to develop better citizenship.

So, to measure the effect of a tried and proven safety program on the community as a whole, G-E employed Group Attitudes Corporation to conduct a field study of the off-job accident situation in a G-E plant town — Coshocton, Ohio, a typical American town, far enough removed from big cities to be completely self-integrated.

Conclusions of this extensive survey leave little doubt that industrial safety training *does* contribute a brighter aspect to the otherwise sorry picture of American safety performance on the highways, at home and at play. Summarizing its report, Group Attitudes Corporation says:

"General Electric Company is trying in many ways through plant safety programs to prevent physical injuries to employees while they are on the job. As this is done, skills and productive capacity of each employee are utilized more fully for benefit of the employee, his family, fellow-employees and the company.

"While greatly reducing accident frequency in G-E plants, such programs apparently are achieving results beyond the immediate objectives. Widening influence of plant safety training in the community is shown by the Coshocton study.

"Conducted to measure relationships between home and road accidents and safety training in the G-E Coshocton plant — in which no lost-time accidents occurred last year—the Traffic Accident Study showed:

—G-E families as a group apparently are 16 times as safe physically as the U. S. public when driving.

—Coshocton families in general, presumably because of intensive industry safety training, are more than twice as safe in automobiles as the average American.

—G-E families have six times as good a record as other Coshocton families in frequency of automobile accidents involving personal injuries.

"Although chance often decides whether persons in an automobile smash-up are injured, G-E Coshocton families have a better safety record by other yardsticks, indicating that:

—Two per cent of drivers from G-E families were involved in automobile accidents in the year ended September 1, 1954, although they comprise 5 per cent of Coshocton's city and county population.

—G-E families have better than twice as good a record as other Coshocton residents in accidents involving property damage only.

"A similar picture appears in the Coshocton hospital and plant study of non-occupational accidents in which (contrary to beliefs of most of their wives) G-E employees are shown to be safer at work than at home.

"Home interviews, in the third phase of the study of off-the-job accidents and home safety knowledge and practices, show that:

—Ninety-five per cent of the G-E households know something about the plant safety program, compared to 55 per cent of non-G-E industrial employees.

—Fifty-two per cent of G-E breadwinners discuss specific safety measures at home, against 40 per cent of other industrial workers and 34 per cent of non-industrial employees.

—Fifty per cent of G-E families use plant safety ideas at home, contrasted to 25 per cent of other industrial workers' families.

—Non-work accidents in the past year were recalled by 11 per cent of G-E Coshocton families, against 18 per cent of non-G-E industrial families and 21 per cent of non-industrial families.

"Basic research in Coshocton suggests a firm relationship between industry safety training and safety at home and on the road."

On the basis of these facts, any company which likes extra dividends might ask:

"Are our safety training efforts in the plant helping to build a better community?"

WIRE ROPE SLINGS

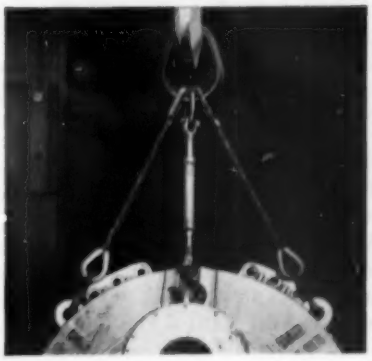
for the jobs that are heavy and awkward

Often you'll come across lifts that are both heavy and awkward. Odd-shaped loads that are hard to "true up." But no matter how difficult they seem, there are always Bethlehem slings that can make the work simpler.

The loads shown here are very good examples. They are the sort requiring the utmost care in handling, since both are heavy components of diesel locomotives. Such lifts are common at the De Witt Shops of the New York Central System, where the photographs were taken.

The larger picture shows a Bethlehem bridle sling, each leg of which is eight-part-braided. Note the pear-shaped link, the heavy thimbles and hooks. The sling in the smaller view is a Bethlehem three-leg type, the middle leg being a turnbuckle. This makes possible quick and easy vertical adjustment where perfect balance is essential.

Possibly slings like these would be helpful in your own plant. But if you favor the more conventional types, Bethlehem can furnish you with every kind . . . regular grommet, single-rope, etc. Why not check with our engineers regarding future needs?



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Sulfur Dust Needn't Explode

By PAUL C. ZIEMKE

EARLY sulfur production resulted in blocky material that required reduction in size prior to using. Today, however, the customer insists on purchasing sulfur in smaller sized particles. This material presents a host of new hazards.

Sulfur in powder form requires extreme care in handling due to the violent dust explosions which can readily result when ignition sources are present. Well-engineered dust evacuation equipment is of paramount importance to keep the exposure level to an acceptable minimum.

Cleanliness is essential lest particulate matter be permitted to pile up on pipes, fixtures, and equipment. Unless this material is suction removed, it sets up conditions like those found in coal mine explosions where an initial blast shakes down and intermixes with air still larger quantities of explosive dusts. This can cause a series of violent explosions extending from one department to the next. Oddly enough, the site of the original explosion is often less damaged than those of succeeding blasts. "Pressure piling" it's termed by explosives engineers.

Sulfur is easily recognized by its pale yellow tone in the crystalline form. It has a melting point of 235 F and ignition temperature of 450 F. At the boiling stage of 832 F it liberates a vapor which is explosive when mixed with air in the proper proportions. Good engineering will control the temperature below 405 F, since below this level the danger of vapor explosions is practically nil.

Burning sulfur gives off deadly fumes of sulfur dioxide which cause serious and permanent harm to the respiratory tract and lungs. For heavy concentrations, oxygen or air-supplied masks are required and for lighter exposures, masks using chemical-packed canisters to eliminate the poison and retain the breathable portion of the air are sufficient protection.

While the areas concerned with sulfur grinding, melting, and processing are not considered Class 1, Division 1 by the National Board of Fire Underwriters, it is essential that electrical power and lighting installations be well engineered and installed by competent mechanics to prevent sparks. Once provided with approved wiring, equipment should be maintained to keep it functioning in first class order.

Water is not desirable as a fire-fighting medium on sulfur fires since the molten mass readily converts the water to steam. In any confined area this can be nearly as disastrous as a dust explosion. Professional fire fighters have had some success with water fog laid on in cautious quantities while they wash down the deadly fumes.

An effective method for the plant fire brigade is the dry powder type of extinguishing agent. The dry powder Met-Al-X is completely smothering in action and penetrates the remotest places. When tried recently on a motor winding fire, it extinguished the fire in one minute without in any way affecting the copper or insulation portions of the motor. It is, however, destructive to metals when wetted and not quickly removed after the fire has been put out.

For large operations, the best size is mounted on a two-wheeled cart and located at some central point. The two-cylinder type uses nitrogen as a propellant and projects a solid stream of powder from the nozzle. Smaller installations manage nicely with wall-type units which are easily carried. Their distinctive yellow color marks their special application.

Chilean Comments on U.S. Safety Methods

WHY AREN'T safety departments in American companies separate entities on a level with other staff functions such as finance, sales, research, engineering, and industrial relations?

Sr. Ramirez (center) attends class at Ohio Mechanics Institute, Cincinnati. With him are (left) Instructor C. V. Culbertson, Regional Safety Engineer for the Post Office Department, and P. K. Johnson, Superintendent of the Evening School.

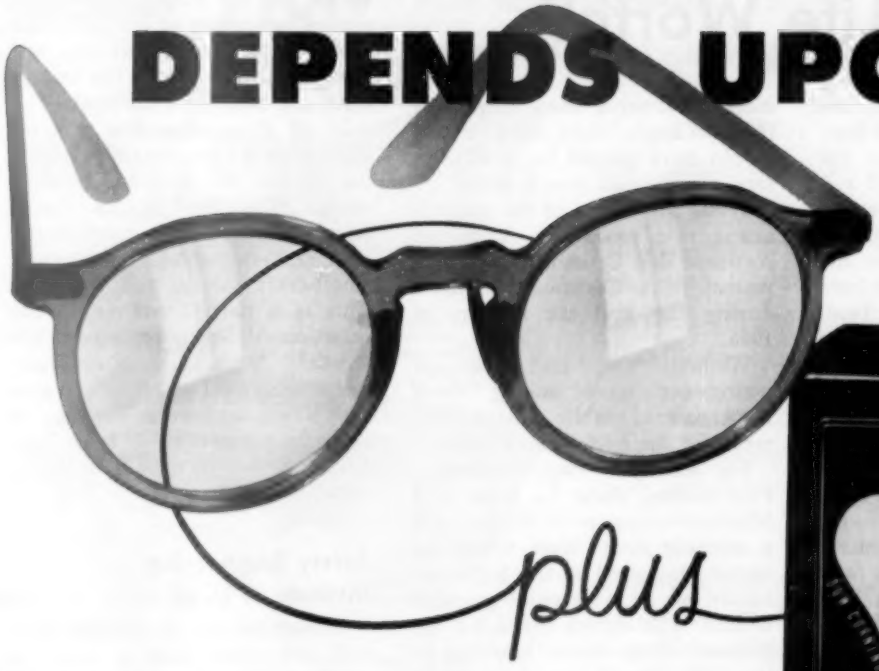
This was the observation of Sr. Helien Ramirez of the Ministry of Labor, Bureau of Industrial Accidents, Santiago, Chile, visiting this country on a Foreign Operations Administration grant to study industrial safety both in practice and in training.

Sr. Ramirez expressed surprise at finding safety departments a part of the personnel or industrial relations division in most companies. He also commented that he could not understand why so many safety engineers in the United States are not graduate engineers.

Commenting on his own country, he stated that the most difficult obstacle to industrial safety is the prehistoric system of monorated workers compensation premiums. In Chile, the type of industry and work experience in no way affect the premiums paid.

Sr. Ramirez said he thought this country's workmen's compensation laws have done more than any single item in drastically reducing industrial accident frequency and severity.

EYE SAFETY DEPENDS UPON



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Install SIGHT SAVER Cleaning Stations and wipe away the best excuse men give for not wearing safety glasses!

Used and preferred by millions, Dow Corning SIGHT SAVERS are the quickest, easiest way to clean and polish eyeglasses. Scientifically treated with the right amount of the right kind of Silicone, SIGHT SAVERS reduce accidents and rejects by making it easy to keep glasses clean. Specified by hundreds of Safety Directors and installed in thousands of plants, SIGHT SAVER Cleaning Stations keep safety glasses safe! No muss, no fuss, no waste; easy to install and maintain.

Dow Corning SIGHT SAVER cleaning stations are available from leading Safety Supply Houses.

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DIRTY GLASSES . . .
like dim lights and dull tools
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each $2.50
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each $1.45

How Much Is Your Life Worth?

In Perth Amboy, N. J., last year, Joseph F. Dudor was driving along the street in his car when he saw a young girl run from a store with her dress on fire. Her hysterical shrieks attracted a crowd, but no one did anything until Dudor leaped from his car and saved her life by beating out the flames. Somebody had tossed a burning match into her lap and turned her into a living torch.

About the same time, a woman was driving on the highway with her husband near Reno, Nevada, when a sagehen shattered the windshield of the car and caused flying glass to cut the wife's face, making deep wounds that bled profusely. It was more than a hundred miles to the nearest hospital, and her life was saved by two telephone linemen who happened to be at a nearby gas station. Oliver D. DeLozier and Daryl D. Heckman knew how to control bleeding with manual pressure against her veins during the long ride to the hospital.

Down in Florida, Airman Second Class Bobby L. Dossett, a water safety instructor stationed at Eglin Air Force Base, was taking a swim at the beach when a friend called to him that a child just brought to shore was not breathing. No one else had attempted artificial respiration and it took the airman 35 minutes of patient work to get breathing started again for the limp five-year-old.

In Rock Island, Ill. that week, William E. Norris, captain of the city fire department, restored breathing to a man overcome by carbon monoxide gas fumes while sleeping in his truck with the motor running.

In Baltimore, Md., Roscoe James, a Negro truck driver, was eating his lunch when he saw a 6-year-old child dart into the street in front of a moving car. James was able to control severe bleeding from a deep laceration in the boy's right arm which would have caused his death before a physician was reached.

These are a few of the numerous heroic cases the American National Red Cross decided were worthy of its Certificate of Merit during the first six months of 1955.

Women, too, and teen-age youngsters were among those who received public acknowledgments of their life-saving service.

For example, two Pittsburgh, Pa., nurses, Jane L. Sage and Marcia Carlson, were driving past a sporting goods store when the owner staggered to the highway, victim of an accidental gunshot wound. The nurses saved his life by controlling severe bleeding in the left side of his neck while taking him to a hospital 23 miles away.

Mrs. Alfred W. Eckels, a Red Cross motor service driver, was quietly enjoying dinner at the Rock Hall, Md., Fisherman's Wharf, when a man fell into the water. He was rescued but not breathing, so Mrs. Eckels applied artificial respiration and wrapped him in a blanket until he appeared normal.

Jane McCallister, a 17-year-old St. Louis, Mo., girl, shared honors with two policemen in saving the life of a five-week-old neighbor child who stopped breathing. While Jane's mother called an ambulance and the police, Jane applied artificial respiration, learned in her high school first aid course. Jane had revived the baby, but he stopped breathing again just before Policemen Walter W. Starmann and Robert A. Freihaut arrived and relieved the tired girl. While the infant boy was being taken to the hospital the policemen took turns with artificial respiration until he was revived.

And Sandra Featherstone, a 16-year-old girl at Marion County High School, Jasper, Tenn., was able to save her own life by application of first aid learned only a few days before she was involved in an auto accident. A severe laceration of her forehead severed an artery, but she applied direct pressure to the wound until she reached a hospital.

In all these cases the prompt, life-saving action was due to training in first aid and water safety skills. The Red Cross trains nearly two million persons every year in swimming, life-saving, small-craft safety, and first aid. This is a partial answer to the question, "How much is your life worth?" Such training not only prepares these two million to give aid when accidents happen; it helps to prevent them from happening through sensible precautions.

Safety Engineering Institute at U. of I.

September 20, 21, and 22, 1955, will see more than a hundred safety engineers and management representatives meet on the Champaign-Urbana campus to discuss current industrial safety problems. The conference is cosponsored by chapters of the American Society of Safety Engineers located in Chicago, Peoria, and St. Louis, and the Society of Casualty Safety Engineers of Chicago in cooperation with the College of Engineering.

This three-day conference will feature six subject sessions, as follows:

1. Gathering and Using Safety Data.
2. Off-the-job Accident Prevention Pays Dividends.
3. New Illinois Safety Legislation and Codes.
4. Eliminating Environmental Hazards.
5. The Safety Clinic.
6. Safety Training is Vital.

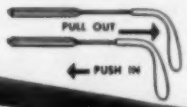
Speaker at the banquet on Wednesday evening will be David L. Arm, Manager of the Industrial Division of the National Safety Council. This will be followed by the "Safety Clinic," led by J. C. Stennett, director of accident and fire prevention, American Mutual Alliance, Chicago.

WATCHEMOKET eye SAVERS

New EXECUTIVE SAFETY SPECTACLE

with Interchangeable, Curved, Shatterproof Lenses
Smartly Styled, Lightweight, Curved to Fit Forehead

MODEL 595 Adjustable Retrax Temples



MODEL 590
Club Temples comfortable over-ear fit

These **EXECUTIVE** Eye Savers include important new features which are not available in any other type of safety spectacles. They were designed by professional men in the optical industry for comfort and multi-purpose eye protection. They represent the highest standards of quality known to the optical industry.

FEATHERLIGHT COMFORT . . . a combination of light weight and perfect balance, plus a universal nose bridge which rests comfortably *on* the nose without pinching at the sinuses.

MAXIMUM SAFETY with better visability . . . large lens size and curved frame design hug the forehead and close the gap at the corners of the eyes.

ONE SIZE FRAME for everyone . . . choice of Eye Savers patented Metal Retrax adjustable temples or comfortable form-fit plastic Club Temples . . . fit and flatter almost every face . . . man's or woman's.

MULTI-PURPOSE USE . . . Executive Safety Spectacles have Extra Lenses which are easily interchanged (snap in — snap out) to get the desired protection: clear lenses protect from impact hazard of flying particles, green lenses provide full protection from impact and from an arc burn six feet or more from the arc (also provide excellent protection from sun glare), gold lenses help visual performance by reducing eye strain when driving against headlights. . . . . also may be used for safety in a plant. The Executive is furnished with protective carrying case, large enough to hold all extra lenses in their individual pouches.

SNAP IN-OUT

CHOICE OF INTERCHANGEABLE LENSES

SAFE — SHATTERPROOF hard methacrylate lenses . . . the finest quality known to the optical industry . . . guaranteed optically perfect . . . cannot distort the image or cause eye strain . . . never pit from sparks or molten metal. These lenses are made by an exclusive Eye Savers process.

- **CLEAR** Safety Lenses for indoor hazardous areas.
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ALL LENSES FURNISHED WITH PROTECTIVE POUCH.

SPECIFY LENS BY CODE NUMBER

Clear	Light Green	Medium Green	Gold
SC1	SG2	SG4	SY1

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Fork Lift Trucks

—From page 29

Through years of work, experience, and research, plus the advice of our materials handling equipment engineers, we at Lewis-Shepard have developed what we believe is a sound set of work rules for fork lift truck operation:

Maintenance

1. The truck should be carefully inspected at the beginning of each work day to make sure it is in sound condition, that it is clean, and that no rubbish is present to interfere with the operator's footing or to obstruct parts of the mechanism.

2. The driver should be sure his hands are clean or that the gloves he wears are dry and free from grease. A towel or wiping cloth should be provided.

3. If there is any doubt in the driver's mind, or at the first sign of any defect in the operation of his truck, he should report it at once. Equipment failures caught in advance will prevent a great percentage of accidents.

4. When a vehicle is involved in a collision of any kind the driver should report it immediately—whether or not he feels that damage has been inflicted.

Loads

1. Loads should be picked up under the center of their weight. The forks should never be off center when lifting. Loads should be prepared so that the weight is centered and evenly distributed to avoid spills which can seriously injure the operator and those nearby and damage materials.

2. Loose loads should be carried in proper containers and should be properly secured to prevent shifting. Among the latest safety devices are load stabilizers which hydraulically hold the load in place while it is being transported.

3. No personnel other than the driver should be allowed to ride on the forks or any part of an industrial truck. Fork lift trucks should never be used to hoist personnel.

4. Loads should be kept below the eye level of the driver. If it is necessary to load higher, the truck should be operated in reverse to give the driver visibility.

5. The load on a fork lift truck should always be tilted against the back rest before moving. By tilting the upright toward the operator, the weight of the load is brought back and balance is improved.

6. Loads should never be butted with the forks or with the rear end. Rear end swing should always be considered by the driver when making turns.

Traffic

1. Operating areas should be kept clear of unnecessary obstacles such as ruts, pits, and spilled grease and oil. Such hazards should be reported and cleared up immediately.

2. The right-of-way used by trucks should be clearly defined and marked. All doorways, overhanging pipes, machinery, and other obstructions should be painted a bright color or otherwise marked for high visibility. Passageways should be well lighted and trucks should be painted so as to be easily seen.

3. Definite traffic rules should be established and enforced. Operators should always keep their trucks to the right and never travel in the wrong direction in one-way passageways. If trucks must operate through any sort of a tunnel, it is advisable to install a partition the length of the tunnel to separate pedestrian and vehicle traffic. Tunnels should be well lighted.

4. Overhead and side clearances should always be clearly and accurately marked. Drivers should not have to guess whether his load will clear an overhead or a piece of machinery.

Operating

1. A fork lift truck should be started and stopped slowly. Drivers should avoid abrupt changes in speed while carrying a load.

2. Drivers should always be facing and looking in the direction of travel.

3. Proper signalling devices such as a horn should be standard equipment on all trucks and should be used when approaching intersections, blind corners, or swinging doors. The horn should also be used when approaching a pedestrian. Used improperly, a horn can be dangerous; sudden loud blasts can startle workers and cause accidents.

4. In addition to signalling, the driver should operate at reduced speeds in the vicinity of obstacles.

5. Railroad tracks should be crossed diagonally, never at right angles. Swinging doors should be approached squarely and in the center to avoid breaking hinges.

6. Crowds and congested areas should be avoided. Particular attention should be paid where congested areas might develop during lunch periods and shift changes.

7. When more than one truck is operating along the same right-of-way they must never travel abreast and should maintain at least 15 to 20 feet between vehicles.

8. A fork lift truck driver should never descend a ramp with the load in front. He should back down the ramp, facing the direction of travel.

9. Bridge gates and tail-gates of trucks leading to loading platforms should be carefully checked by the operator to see that they are securely anchored and strong enough to carry the truck and load.

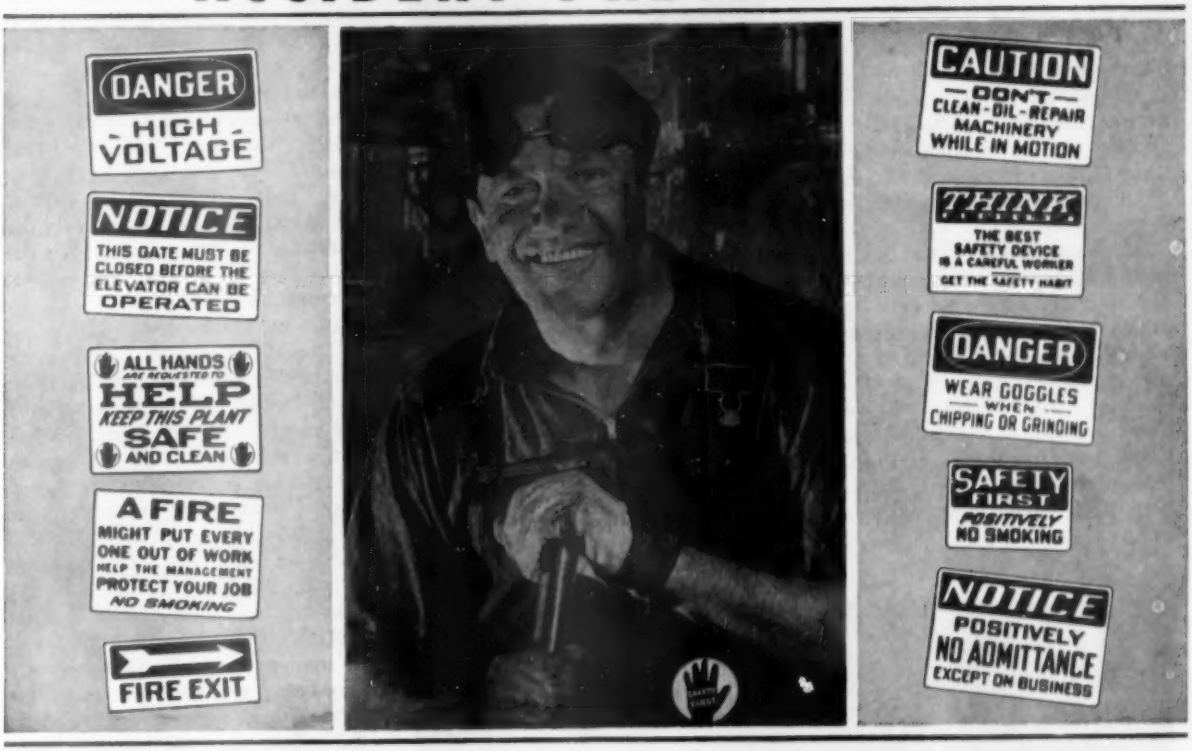
10. A fork lift truck running empty should never be operated with the forks raised.

11. When parking the operator should keep his vehicle clear of aisles, platforms, and doorways. When parked and when on elevators, all power should be shut off and the brakes set.

12. Fork lift trucks should always be kept clear of open ends of loading docks.

Stonehouse SIGNS

FOR INDUSTRIAL ACCIDENT PREVENTION



There are many types of Stonehouse Signs. Most are worded to cover specific hazards, such as Eye and Goggle signs, Fire, Machine, Electrical, and so on.

Others are important for the protection they furnish, covering such features as Entrance, No Parking, Stop and similar warnings—listed as Miscellaneous signs.

STONEHOUSE SIGNS

Whatever your hazard, warning or guidance requirements, there's a Stonehouse sign to meet them. Shown in full color in our complete 64-page Catalog.

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"Signs Since 1863"

The Air Materiel Story

—From page 27

of vigorous and intelligent application of the time-honored "Three E's" of safety—engineering, education and enforcement — plus a few points of emphasis that give these safety specialists, perhaps, a slight edge over some of their alert brethren in the profession.

For instance, I keep wondering if they haven't developed a sort of "accident radar" system through their painstaking attention to the reporting and studying of *minor* accidents. Such incidents never show up in injury rates and cost statistics—but their analysis does permit the AMC safety staff to appear almost clairvoyant when they pounce down and eliminate a potential trend to major accidents.

Air Materiel Command is largely staffed with civilian personnel, approximately nine per cent being military. Most of the safety people in AMC are civilian also, a notable exception being Col. L. F. Carter, AMC Ground Safety Chief. Although the staff is relatively small, these ubiquitous safety directors, engineers and inspectors cover a lot of ground in their daily work.

MOAMA safety staff girls sell eye safety program with mobile goggle service cart.

Selection of the AMC safety staff had the objective of assigning the best qualified personnel available to each position. This philosophy has borne good results in the high quality of safety program operating throughout AMC today.

After initial appointment, the tenure of each individual depends upon his performance — and the zest with which every man and woman tackles the job has engendered respect for the safety program at every contact.

Relationships between the staff and every level of command in every Area and Depot leave little to be desired. Every supervisor and every worker has come to know that top command believes in and supports the safety program — and expects creditable safety performance—so they accept safety regulations with a high degree of enthusiasm.

During my visits to AMC installations I was impressed with the keen interest and pride of the various commanders in their ground safety programs. With such complete support at top level, the safety man operates with confidence and authority. This does not mean that he would consider "throwing his weight around." He can, and sometimes does halt important operations for safety reasons, if he feels the hazard is too great to wait for the customary method of filing recommendations.

But he knows his ruling must be based on sound safety principles. He knows his ruling must be reviewed at headquarters by his chief, who then must work out a solution with the proper directorate, if the particular operational problem is not covered in established regulations.

As an example, and to point out the efficiency of the security system, the safety staff cannot violate security regulations, even by inadvertence. While our group was being escorted through a restricted maintenance operation by the safety director of one Area, he was called to the office of the assistant superintendent. The latter individual's boss, who was ill that day, had not passed along the general's clearance for the tour in that particular plant—so we waited ten minutes for direct clearance.

Because of the wide diversity of operations in Air Materiel Command, the safety staff has found it necessary to assign responsibilities according to special hazards, so that each man may specialize, to the highest possible degree, in studies of the hazards he will encounter. Thus, responsibilities for overall administration of the safety program at Area level, together

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Efficiency, safety and economy are served by this device at Tinker AFB—a guarded metal-cutting saw that removes tops and saves wooden boxes for re-use. Joe Guerin, OCAMA safety director, explains it to Colonel Carter and Col. Earl Howarth, now Assistant for Safety to Commander, Far East Air Forces.

New, radio-active, automatic fire guard!

C-O-TWO PRE-DETECTOR SYSTEM

Each pre-detector head protects up to 3,600 square feet of area . . . harmless radio-active element utilizing ionization chamber principle quickly detects all forms of fire . . . requires only simple two-wire circuit and insignificant wall space for controls.

This completely new and positive means of spotting fire is just what you've always needed and wanted . . . detects in the earliest stage, invisible combustion gases, visible smoke, slow smoldering, as well as open flame. The C-O-TWO Pre-Detector System is simple to install, extremely economical to maintain and doesn't depend on thick smoke or heat for actuation.

As many pre-detector heads as necessary can be connected together in a single circuit and up to 16 separate circuits or spaces handled by one system. With a single circuit the pre-detector heads are connected directly to the fire indicating cabinet, while with multiple circuits the pre-detector heads are first connected to one or more space indicating cabinets capable of visually showing by number the exact location of the fire. Relays perform such functions as sounding alarms, closing fire doors, shutting down ventilation and releasing fire extinguishing systems.

The C-O-TWO Pre-Detector System has been subjected to extensive testing and carries Underwriters' Laboratories, Inc. listing, as well as Factory Mutual Laboratories approval. Proven pilot installations have been made in such diversified properties as a television station, an electric power company network analyzer room, a railroad signal tower, an airline flight training equipment room and the offices of an insurance company.

Don't take unnecessary chances any longer . . . the extensive fire protection experience of PYRENE—C-O-TWO over the years is at your disposal without obligation. Get complete facts about this new C-O-TWO Pre-Detector System today!

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portable fire extinguishers . . . built-in fire detecting and fire extinguishing systems

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Gas Analyzer Controls Antibiotic Production

INSTRUMENTS to guard against explosive and toxic gases are finding greater utilization in various types of process control applications throughout industry.

An example of this can be found at Lederle Laboratories Division of American Cyanamid Company, Pearl River, New York, where aureomycin is manufactured. In producing the antibiotic a residual cake useful as a growth-stimulating supplement in animal and poultry feeds is obtained. It contains small amounts of aureomycin.

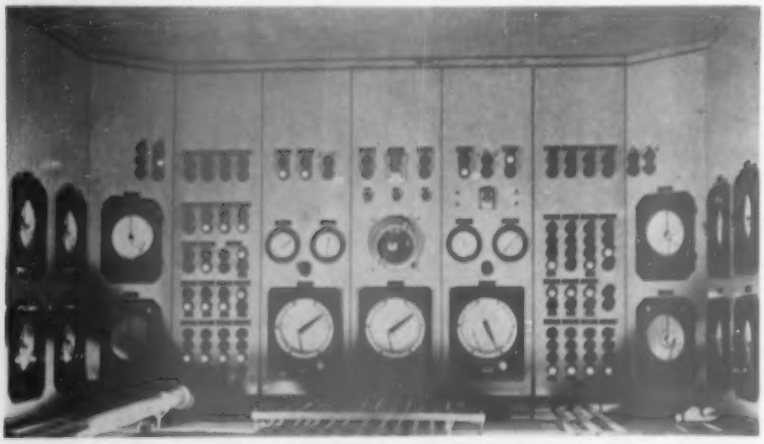
The problem was to remove from this residue a volatile chemical solvent, aliphatic alcohol, picked up during extraction of pure aureomycin.

The cake is processed in a three-story apparatus, a Wyssmont drier, where the solvent is removed and reclaimed for further use.

To maintain a constant check on the percentage of solvent in the cake, Lederle technicians installed a combustible gas alarm, developed by Mine Safety Appliances Company. The instrument sets off visible and audible alarms if the amount of solvent in the dried cake is great enough to cause the atmosphere in the discharge conveyor to reach a predetermined alarm level of 27 per cent of the lower explosive limit. When this happens, operators have time to investigate and take corrective action before any significant amount of hazardous solvent-wet cake is discharged from the drier.

At the same time, the instrument serves as a process control apparatus by indicating whether the drying process is malfunctioning. If the aureomycin cake contains too much solvent and the vapor concentration within the conveyor increases as determined by the analyzer, operators can make necessary adjustments.

The gas analyzer is located in the main control panel of the Wyssmont drier. Air samples are piped about 150 feet from the drier to the analyzer and passed through a detector cell containing one of two heated platinum wires which form a balanced electrical circuit. The second wire is housed in a compensator cell containing uncontaminated air. Any combustible solvent in the air sample is burned on the heated wire. This unbalances the electrical circuit in direct proportion to the percentage of solvent in the sample. When that reaches 27 per cent of the lower explosive limit the alarm circuit is energized.



Combustible gas analyzer (middle of center panel) serves both as a safety device and a process control instrument.

Lab Accidents Show 'Alarming' Increase

A general increase in research and quality control work in large and small industries has resulted in an "alarming" upturn in the number of laboratory accidents, J. O. Bengston, president of the Chicago Apparatus Company, reports.

"Many of these accidents are not the reportable type," Bengston said, "and there is presently no statistical material available for comparative purposes. Our field men have reported, however, that the accident rate is increasing far beyond the rising rate of laboratory activity."

Bengston said the increased number of accidents indicated a lack of cooperation with laboratory and safety directors within individual companies, as well as a failure to develop a proper mental attitude in the laboratory staff, and failure to make use of available safety devices and safety engineered laboratory tools.

He urged chemists and others engaged in laboratory work in industry to abide by safety rules, and to use apparatus and equipment with safety features.

Bengston cited the heating mantle as "probably the most important single contribution to laboratory safety in a decade." Other items include clamps, safety tongs, glass tubing manipulators, face shields, pipette fillers, goggles, respirators, asbestos and rubber gloves, air stirrers, stopper removers, and bottle and carboy tippers.

A heavily bonderized fume hood, especially engineered for safety, is another example, he added.

Where constant temperature ovens or other equipment falling under Underwriters' Class I, Group D, classification as "Hazardous Locations" are necessary, Bengston said, laboratory directors should seek qualified engineering counsel.

Sign on a parsonage door: If you have troubles come in and tell us about them. If you haven't, come in and tell us how you do it.

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Who's speaking? Any worker who's ever worn USSSCO's amazing lightweight **SAF-I-FLEX** cover goggle. They like it for four reasons:

(1) TRUE COMFORT –
actually weighs less than 2 ounces . . . soft, flexible, frame has wide-rolled edge.

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fits any face contour . . . fits over personal glasses, too.

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The Air Materiel Story

—From page 62

with education, training, program promotion and the like, are in the hands of the Area safety director, just as they are handled by Colonel Carter at Headquarters. Likewise, just as Colonel Carter's deputy chief, Robert T. Homewood, handles problems of industrial engineering and several classified duties, and chief assistant Eugene E. Cole handles the research engineering and statistical analysis, their counterparts have similar responsibilities at Area and Depot level.

This method again reflects the AMC concept of decentralized operation and control. It is a carefully designed system of assigned responsibility, wherein every subordinate command and, in fact, every individual has a definite job—and is expected to make decisions within the limits of the assigned authority.

(When AMC grew to such gigantic proportions—with today's concept of worldwide USAF commitments — decentralization was inevitable. It was done by delegating additional responsibilities to the eight Air Materiel Areas and seven Air Materiel Depots—plus five specialized Aviation Depot Groups—at strategic points around the country. Each Area and Depot was assigned "prime" responsibility for certain items of Air Force needs, as well as certain manufacturing, processing and assembling operations related to these items.)

Lynn Kieffer, MOAMA safety director (left), flies "Green Cross for Safety" flag beside jumbo safety poster. In case of disabling accident, flag flies at half mast for day.

Hal Rush, safety director for WRAMA, developed these warning signs for maintenance machines, pointing out special hazards.

This theme of individual responsibility for high level performance is reflected in the safety record, just as it is reflected in the excellent esprit de corps that is evident throughout the command. This undoubtedly is a result of the AMC management conviction that one of its most important resources is people.

This fact becomes doubly important each year as AMC is called upon for more and more production—in the face of continued cutbacks in personnel. (In the last two years they have been forced to drop approximately 18,000 civilians, 1,500 officers and 7,000 airmen.)

This situation, obviously, called for the utmost in management ingenuity and enlightened personnel administration, in order to conserve the manpower still available and to insure the maximum productivity from each individual employee.

So AMC last year inaugurated a program of career development —to increase efficiency and to groom promising employees for jobs of higher responsibility; a program of executive development; a suggestions and awards program that has paid big dividends, and an off-duty education program for both academic and vocational training—plus the intensified safety program.

Results: the "quit rate" on AMC jobs is now *40 per cent less* than the average industrial rate—and it is now *four times safer* to work in an AMC base than in an average industrial plant!

But the ingenuity of AMC workers is not to be outdone by the ingenuity of management! More than 6,500 suggestions were adopted in the first year of the awards program, cutting AMC operating costs about $6,389,000, and paying the suggesters $250,000!

Suggestions may be concerned with production costs alone, or they may be strictly safety items, but quite often the suggested improvement in operation will have a distinct bearing on both. For instance, at SAAMA (San Antonio Air Materiel Area), as well as throughout the command, materials handling is a major headache—both in operating costs and in accident exposures—so it logically is the subject of many suggestions.

One suggestion, adopted after an estimate that its use would amortize the cost of installation within six to eight months, provided rollers and electric motor power to "conveyorize" entire loads on the bed of a truck. The theory was that the entire collection of boxes, crates and other pieces for a truckload would be assembled on the conveyors of the shipping warehouse and transferred as a unit to the truck—cutting loading time to a minimum and eliminating the source of many strains, sprains and bruises for loading dock personnel. At the other end, the motor pushes the entire load on to the receiving conveyor.

In actual use the system not only eliminated all such injuries, but the installation cost was amortized in two and a half months.

Incidentally, an early suggester of this conveyorized truck idea was Ed H. Hill, materials handling specialist. He is head of the Materiel Facilities Division at Kelly Air Force Base.

Equally ingenious are some of

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"TUG" WILSON'S

Wausau Story

Kenneth L. "Tug" Wilson, Western Conference Commissioner and President of the U.S. Olympic Association, visited Wausau recently. His story appears in pictures and captions on this page. At lunch, Mr. Wilson told a group of Wausau businessmen and educators that he admired Wausau's energetic "personality." It's this same *personality*—straightforward and businesslike—that policyholders like about Employers Mutuals' representatives.

For instance, Employers Mutuals believes in taking the mystery out of workmen's compensation insurance.

Stated simply, our story is this: the cost of compensation depends upon accidents. Accidents are controllable. Thus, the cost of workmen's compensation insurance is, or *can be*, a cost you can control.

We have a reputation for being able to reduce insurance costs through the practical prevention of accidents. May we show you how *you* can reduce losses and costs with Employers Mutuals' supervision? Phone our nearest office, or write Wausau, Wisconsin.

"Holiday from Apron Strings". Mr. Wilson with YWCA Instructor, Ruth Fox.

"I suppose most all Americans believe in physical fitness. Wausau people really put their belief into action. One fine example, for me, was the popular "Slim Gym" class at the YWCA. The "Y" encourages regular attendance by giving free baby-sitting service while the young mothers 'work out'."

Wausau hurdler, Jim Seefeldt, skims one for Mr. Wilson and Coach Smiley.

"Our future Olympic hopes depend on the support of cities like Wausau—the moral and financial support of citizens, and the enthusiasm of large squads like Coach Smiley's at Wausau High. The people of Wausau are solidly behind their athletes. It's the right kind of city for youngsters to grow up in. And that makes it my kind of city."

"I found the Little League typical of Wausau's interest in sports. Three fields are provided for the youngsters' exclusive use. And the 1955 call for candidates brought out 500 kids! An even greater showing is the 1500 young people who come out for *winter* sports. The Wausau Winter Sports Council gives instructions in skiing, skating and curling, free of charge. This is the community spirit that has made competitive sport so much a part of American life."

A close one at first! Mr. Wilson with George H. Stueber, one of Wausau's Little League Commissioners.

Employers Mutuals *of* Wausau

Bike Safety Tests Are Fun!

Participants receive coaching on various tests from Don Glancey, member of Bituminous Casualty Corporation's safety engineering staff.

THE IMPORTANCE of the fun factor and the irresistible appeal of prizes and treats cannot be overemphasized in safety education of children. Both attractions contributed largely to the success of the Bituminous Bicycle Brigade, a safety program sponsored in Rock Island, Ill., by the Bituminous Casualty Corporation, public and parochial schools, and the police department.

Prizes of three new bicycles and dozens of accessories, plus free ice cream treats from the local Borden branch, encouraged enrollment and participation. But the actual fun of showing off their ability in the skill and performance tests probably was the strongest attraction to the 500 youngsters who took part.

Balancing, signaling, turning, the obstacle course, one-hand riding, braking, and turn-and-stop tests revealed an intensity of interest far beyond the expectations of school and police authorities. As a consequence, it is expected that next year's program will place even more emphasis on the skill test sequence.

In addition to the performance tests, the program included a bicycle safety inspection, encouragement of license registration, the showing of the motion picture, *Bicycling Safely*, and the distribution of 10,000 copies of the National Safety Council leaflet, *Sammy Sprocket Says*. Posters were used in all the schools and all students from third through ninth grades, the group included in the activity, received copies of the local bicycle ordinance.

"Our 1955 program has been the most successful bicycle safety activity we have ever held," said Dr. H. M. Lindstrom, safety coordinator for the Rock Island school system, "and I cannot help but give credit to the Bituminous Casualty Corporation.

"The schools and police department realized we needed help, and when we approached Bituminous we received ready cooperation. This insurance underwriter, which has an outstanding safety engineering department, contributed the services of several safety engineers, supplied important printed forms and bulletins, purchased literature and donated prizes."

Zig-zag obstacle course tests judgment, accuracy and ability in close quarters.

Man-Cooling Fans

A RECENT INCIDENT involving a man cooling fan is worth telling.

This fan was located in one of the rolling units. While the unit was rolling small shapes, a cobble developed. The cobble left the hot beds and the front end of the cobble entered opening in the screen. Every blade in the fan was sheared off, but all parts were contained within the fan enclosure.

This fan guard was in first class condition and made of material that can stand a terrific beating.

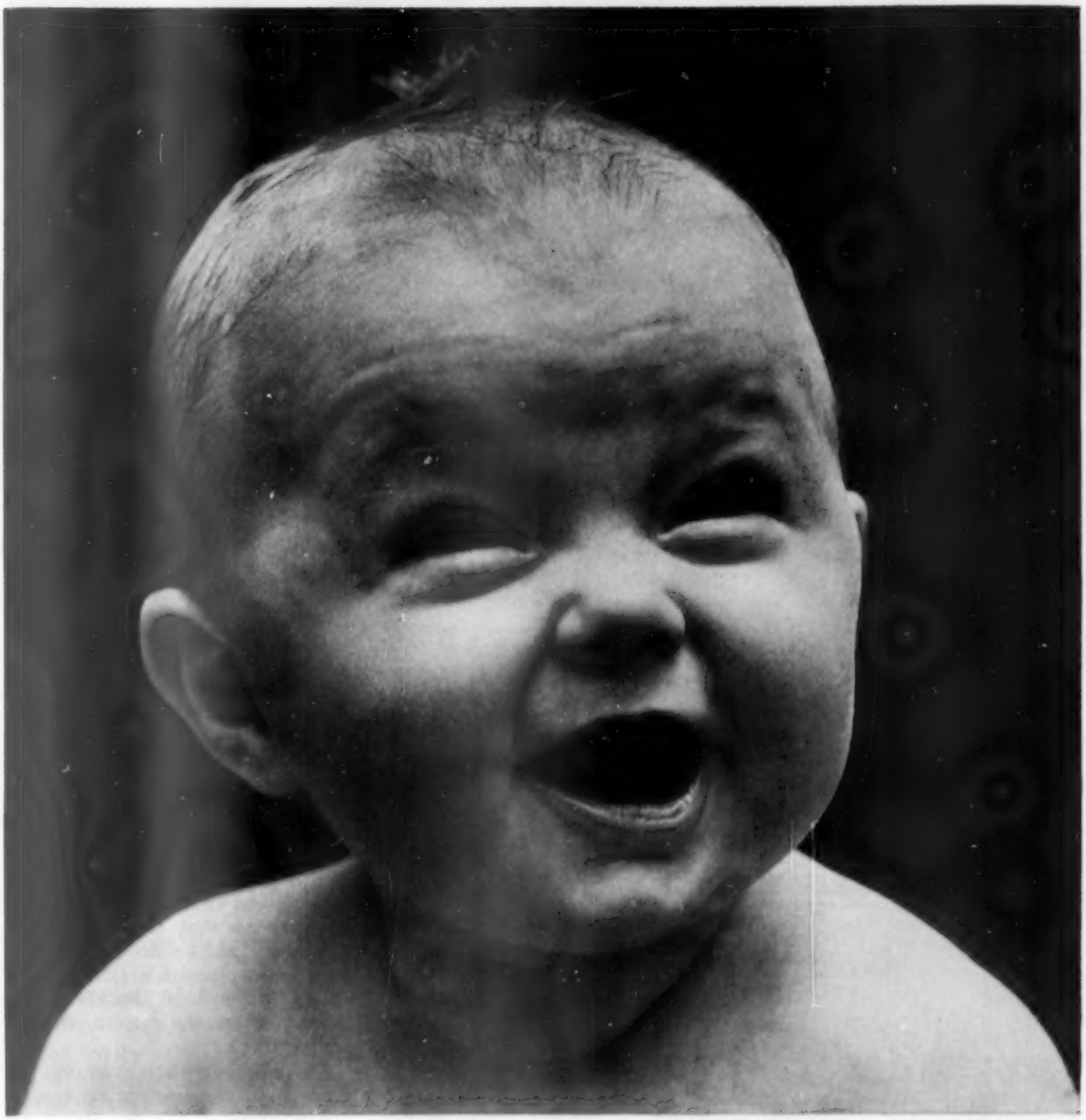
Warns Against Flammable Davy Crockett Hats

IN A MEMORANDUM to fire chiefs in his state Michael H. Prendergast, director of safety of New York, has warned that Davy Crockett hats made completely of paper are being marketed. The hats extremely flammable and have a short burning time, the memorandum stated.

Dark brown with black coloring, the imitation coonskin hats are made of shredded crepe-type paper with green paper linings. They have no trade mark or manufacturer's identification.

"How are you getting along with your driving?" inquired a friend of the beginner.

"Oh, fine," she bragged. "Yesterday I did 50 miles an hour for several minutes. Tomorrow I'm going to try opening my eyes when I pass another car."



"YOU'RE TELLING ME!"

"That's a funny one. You telling me what a great thing the telephone is. As if I didn't know!

"Why, I'm one of the main reasons we have telephones in our house. For you can bet your life I keep the folks pretty busy around here.

"Just think! If we didn't have a telephone, Grandma couldn't call up to ask if I had a tooth. And Daddy couldn't talk to us when he's out of town. We couldn't order things in a hurry from the stores. And Mother would be tied down just something awful.

"And suppose one of us suddenly took sick? Or there was a fire? Or a robber, maybe? Well, I don't worry about those things when I see the telephone.

" 'Doesn't cost much either,' my Daddy says. And Mother says, 'I don't know what I'd do without it.' "

BELL TELEPHONE SYSTEM

Industrial Health

—From page 50

separation process regularly reduces suspended solids from 12,000 to 17,000 parts per million at the input end to between 20 and 100 parts per million in the effluent. It is possible that the same vacuum degassification process could be applied to standard sewage sludge digestion processes with an increased capacity and reduced costs resulting.

It is estimated that the construction cost of the anaerobic contact process plants for ½ to one million gallons per day capacity are likely to be approximately ½ those of trickling filter plants when both types are designed to remove 95 per cent of the five day biological oxygen demand.

The operation and maintenance cost of the anaerobic process are apt to be slightly higher than those of the trickling filter plants.

The total annual charges of the anaerobic plants are estimated to be approximately 70 to 80 per cent of the cost of trickling filter plants, based on the usual municipal financing of construction.

The process appears to be sufficiently "rugged" to absorb the usual variations in conditions which are to be expected in the wastes from packing houses.

There are still a considerable number of unsolved problems in connection with the construction and operation of this type of plant.

A Health Program

Health Achievement in Industry, 1955 Award to Sonoco Products Company. Anonymous. Industrial Medicine & Surgery 24:209-212 (May 1955).

THE INDUSTRIAL MEDICINE ASSOCIATION has given an annual award for health achievement in industry since 1949. This award is given to the company for its effort in supporting a medical department of very high class. This year it went to the Sonoco Products Company of Hartsville, S. C., manufacturers of paper carriers for the textile industry and other paper products. The company employs approximately 1,800 people, working on three shifts.

The company was the first in the South to introduce a health and accident insurance program and hired its first industrial nurse 25 years ago. The company appointed a full-time safety coordinator four years ago and a full-time medical director three years ago. The medical staff now includes Edward M. Gunn, M. D., full-time medical director, and Audrey H. Gunn, M.D., part-time, and an adequate staff of consultants available from surrounding communities.

There are four full-time registered nurses, one supervising nurse on day shift duty and three others who rotate on the three shifts. There is also a full-time medical secretary.

The medical program for employees starts with a selective placement examination and with voluntary periodic health maintenance examinations. The period between periodic examinations varies from monthly for food handlers, annually for executives to 18 months for employees on non-hazardous occupations. Over 95 per cent of the employees have availed themselves of these periodic examinations and there has been a 60 per cent increase in the number of employees consulting physicians in the community.

Dr. Gunn makes regular plant tours and through these tours has established rapport with the employees so that they feel completely at ease with him. There are regular health articles in the plant paper and booklets are available in the health service department.

All employees are examined by the health department on return from absence due to illness or injury.

All employees receive audiometric and visual screening examination at the time of hiring and the same examinations are included in the periodic health evaluations.

As a result of studies of temperature and humidity in the working environment which have been conducted by the medical department there have been numerous changes in procedure. The paper rolling and drying department has been air conditioned, eliminating heat exhaustion in

N.Y.U. Displays Protective Equipment

AN ATTRACTIVE portable exhibit of industrial protective equipment for use in the 10 industrial safety courses at New York University has recently been completed. The exhibit was assembled by a fellowship holder, Manuel C. Thomas, and a graduate student, Stanley C. Grossman.

LEON SWIRBUL

Portrait by Fabian Bachrach

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"At Grumman, we are proud that in our person-to-person campaign over 10,000 employees joined the Payroll Savings Plan and grasped the opportunity to buy U. S. Savings Bonds regularly every payday. These results were achieved through enthusiastic, patriotic teamwork. I urge every American company to reactivate their Bond Program now in a nationwide effort to maintain sound money and a stable economy."

LEON SWIRBUL, ***President, Grumman Aircraft Engineering Company***

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A phone call, wire or letter to Savings Bonds Division, U. S. Treasury Department, Washington, D. C., will bring prompt response from your State Director, who will help you to organize a person-to-person canvass that will put a Payroll Savings Application in the hands of every employee. That's all you have to do. Your employees will *grasp* "the opportunity to buy U. S. Savings Bonds regularly every payday."

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Pouring, drawing or siphoning industrial liquids are outmoded, dangerous practices. Correct them with Tokheim pumps. There is none better, none more versatile. Easily installed in drums, pipe lines or underground tanks. Long-lived, inexpensive. Many models. See your dealer, your Tokheim representative or write factory for catalog today!

* The use of Tokheim pumps often earns a lower insurance rate.

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Pump is furnished standard with molded, synthetic diaphragm. Leather diaphragm optional. Ask for approved list of liquids showing recommended diaphragm.

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this area. The air conditioning program is scheduled for expansion to other areas of the plant as the result of the success in this particular area.

Complete individual health records on each employee, including X-ray films, vision and hearing examination result and other laboratory findings, are maintained in confidential files in the health department. These are available to local physicians on request of the physician and the employee.

In addition to purely medical work the medical director is responsible for industrial hygiene control. He is assisted in this by the chemical laboratory personnel. There is no state industrial hygiene service in South Carolina.

The medical director also meets monthly with the central safety council. Each plant department has monthly safety meetings with all employees attending and there is a special housekeeping committee. This intensive work has resulted in a decrease in accident frequency from 22.5 in 1949 to 1.5 for 1954. The severity rate is currently 0.09 as compared with the average of .85 for companies of this group.

In addition to the usual periodical reports to management on the progress of the medical department program, Dr. Gunn also makes a report to employees which is published in the plant paper.

Score One for the Coffee Break

Thirty-eight persons escaped possible injury when an explosion and fire swept through a group of buildings in downtown Los Angeles.

They were saved by that popular institution, the coffee break. All the employees, the UP reports, were out for refreshments when the explosion took place in a paint shop around the corner from the foundry at an aircraft parts plant.

Sign on the house of a justice of the peace: "Are you fit to be tied?"

The Air Materiel Story

—From page 66

the innovations dreamed up by safety staff members at the various installations to guard against mechanical hazards or improve safe practices. That's just another reason why safety personnel are always welcome in operating areas.

One innovation that caught my eye stems from the hazardous nature of many of the operations. Since many materials are highly flammable or explosive, there are many buildings that confine smoking to limited areas; other buildings permit no smoking at all, and in some areas one cannot smoke even in the paved street between buildings. For that reason, receivers are provided for cigarette stubs at each entrance to the No Smoking areas. When safety inspectors noted that the poor aim of some smokers made the regulation ineffective, and also created a housekeeping problem, they designed a wide-mouthed container covered by a coarse grating that confined the stubs.

In addition to Colonel Carter as Chief, and the two senior safety engineers, Homewood and Cole, the Headquarters Ground Safety Office personnel includes a secretary, a clerk-typist and two statisticians. Their program covers the eight Areas, seven Depots and five Aviation Depot Groups mentioned, plus two USAF Logistical Control Groups, Wright Air Development Center, and Wright-Patterson Air Force Base, where AMC Headquarters is located. (Each one is worthy of a separate story, if we had the space.)

The Ground Safety staff complement for the entire command consists of ten supervisory safety engineers, 25 safety supervisors, 42 safety inspectors, 15 safety specialists (trainees), and 35 others in statistical and clerical jobs. In terms of assigned safety personnel, it's a ratio of about one-to-1,600 employees throughout the command.

During 1954, the Air Materiel Command tabulated 316,104,600 manhours of civilian employment;

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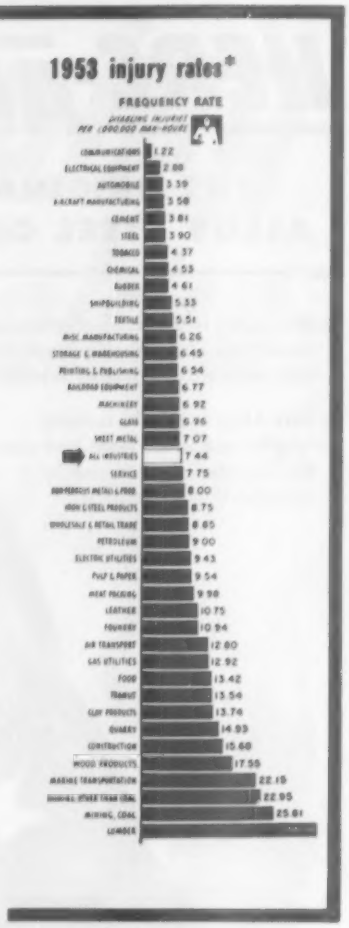
Because ALGRIP . . . the world's only abrasive rolled steel floor plate . . . has a surface that makes slipping practically impossible . . . on level floor or incline . . . wet, oily or greasy . . .

And because ALGRIP's controlled-depth of abrasive penetration in the plate assures a constant, enduring anti-slip floor surface.



National Safety Council's "Accident Facts" 1954 Edition

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4,844,200 military man-days' exposure, and 43,195,800 miles of governmental motor vehicle operations—and that, certainly, is all the argument the Commander needs when he demands an effective safety program.

Also during last year, the statistical branch of the Ground Safety Office processed 249 military and 696 civilian disabling injury reports, 305 government motor vehicle accidents, and 116 aircraft ground accident reports.

All AMC installations last year processed 51,792 non-disabling injuries, coding and tabulating them with IBM equipment. Then they are transmitted electrically to AMC headquarters, where they are further processed and analyzed—to aid in developing further accident prevention controls. (At Headquarters, they let me visit their computing marvel, "Univac," a weird machine with an electronic brain and *memory tanks).*

Complete cooperation was afforded me at every installation I visited, and an extensive tour was arranged at each point. The places visited and the commanders and safety directors who were my hosts included Warner Robins Air Materiel Area, Robins Air Force Base, Georgia, Maj. Gen. K. E. Tibbetts, Commander, and Harold Rush, Chief, Ground Safety; Mobile Air Materiel Area, Brookley Air Force Base, Ala., Brig. Gen. L. B. Kelly, Deputy Commander (Acting Commander) and E. L. Kiefer, Chief, Ground Safety; San Antonio Air Materiel Area, Kelly Air Force Base, Texas, Maj. Gen. T. C. Odom, Commander, and Fred E. Keienburg, Chief, Ground Safety; Oklahoma City Air Materiel Area, Tinker Air Force Base, Oklahoma, Maj. Gen. William O. Senter, Commander, and Joseph L. Guerin, Chief, Ground Safety; Topeka Air Force Depot, Topeka, Kansas, Col. B. W. Feiling, Commander, and Frank Fudge, Chief, Ground Safety, and Gentile Air Force Depot, Dayton, Ohio, Col. L. F. Mulzer, Commander, and Paul Goss, Chief, Ground Safety.

Everywhere I went on the AMC tour, Area and Depot Commanders expressed the deepest

interest in the functioning of the safety program, and expressly arranged that I should have the opportunity to observe every operation of interest. It was obvious that each of them felt his responsibility for safe operation most deeply.

But at no point did I find a more intensive interest in all phases of the safety program than that of General Anderson. As head of the Directorate of Personnel and Support Operations, he is vitally concerned about the success of the program.

When I complimented him and the entire command on the third successive NSC Award of Honor, General Anderson said:

"I think our safety program is little short of miraculous. We have a most competent Ground Safety staff, and I'm sure they will continue to perform in the future as they have in the past."

Facts About Hospitalization

About one man in every seven at ages 60 and over is admitted to a hospital in the course of a year, according to the experience among Metropolitan Life Insurance Company personnel.

This proportion is somewhat higher than the rate among those at ages 45 to 59, and approximately twice the rate among those under 45 years of age. The study relates to a large segment of the company's male office and field personnel, including those permanently disabled and the retired.

The average duration of hospital stay in the experience increased progressively from each age group to the next. For the entire age range of 60 and over the average length of each hospital stay was 18.1 days. This is one and one-half times the average for ages 45 to 59, and nearly twice that for ages under 45.

Surgery was performed on two-fifths of the men at ages 60 and over who were hospitalized. The surgical cases spent appreciably less time in the hospital than did the nonsurgical, the average periods being 14.7 days and 20.7 days, respectively.

Leading cause of hospitalization

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*Exclusive Chemical Liquid . . . available only in Fyr-Fyter Loaded Stream INSTANT Extinguishers.

This test fire is conclusive proof of Instant superiority! Karbaloy, the extinguishing liquid developed by engineers now prominent in atomic research, killed the fire in one-third time required by ordinary extinguishers . . . and only two quarts of liquid was used! Karbaloy also fireproofs as it extinguishes . . . preventing flashback or fires in rubber and other combustible materials that start up again *after* being put out by ordinary chemicals.

Fyr-Fyter Instants are designed to stop the *most prevalent fires* in wood, rubber, fabrics and other general combustibles. They require no recharging, except after use, and need no protection from freezing. The long-range Loaded Stream can be discharged at a *safe* distance of 45 to 60 feet to fight flames that cannot be approached at close range. No other extinguisher provides the combination of advantages found in Fyr-Fyter Instant Extinguishers!

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☐ Send a Fyr-Fyter Representative. Let's talk it over. No obligation.

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among those 60 and older was diseases of the heart, which accounted for more than one quarter of all nonsurgical cases. Second leading cause was diseases of the digestive system. Of the cases hospitalized for surgery, about 14 per cent were for prostatectomy and a like proportion for herniotomy.

Public Activities Win Honors for Railroad

SAFETY ACTIVITIES carried to the schools, civic clubs, and other organizations were a part of efforts of the Atlantic Coast Line railroad recently recognized by the National Safety Council when that line was designated to receive the Public Safety Activities Award.

Rather than confining its program to railroad employees and patrons, the railroad's safety department in recent years has expanded its activities to include the public. During 1954, 143 schools were visited and safety messages were delivered to more than 75,000 students. Since the beginning of this school activity more than a quarter of a million school children have been reached in the cause of safety.

Other phases of the railroad's community safety program include checks at rail-highway crossings and warnings to motorists observed making unsafe approaches and improperly negotiating crossings.

"Railroad Crossing Safety Days" have been held at numerous points in the six states served by Coast Line rails, sponsored jointly by the railroad and the community.

The railroad's activities in the "Signs of Life" program and the sound program administration by its safety department with special emphasis on off-the-job accidents were other accomplishments recognized by the National Safety Council in making the award.

Wife, berating husband: "Why don't you get fat, bald and prosperous like other men?"

PERSONALS

Heads Equipment Assn.

JOHN B. DAVIES, manager of industrial sales, Mine Safety Appliances Company, Pittsburgh, Pa., was elected president of the In-

John B. Davies

dustrial Safety Equipment Association at the group's recent annual meeting.

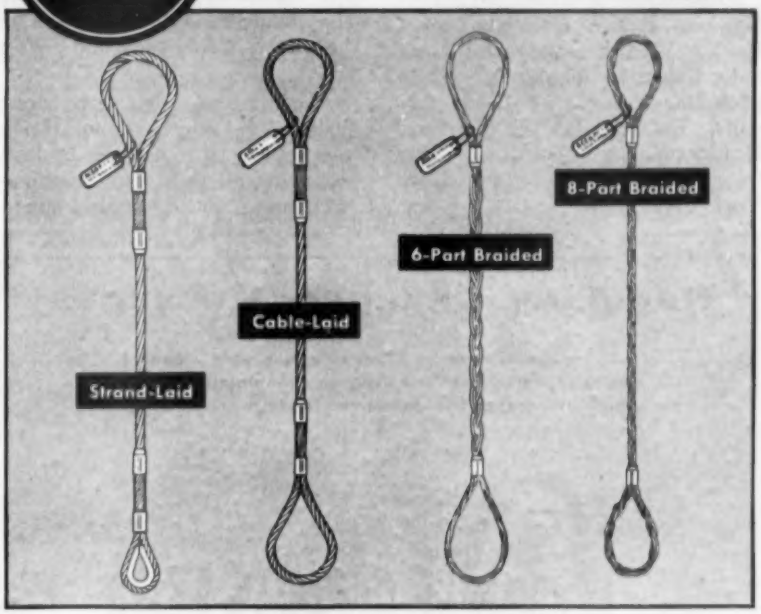
Mr. Davies, a native of Pittsburgh and a veteran of World War I, is a graduate of Carnegie Institute of Technology. He joined Mine Safety as a chemist in 1919, five years after the company was founded. Before assuming his present position, Mr. Davies was assistant sales manager.

He is a member of the American Society of Safety Engineers, the American Industrial Hygiene Association, and the International Association of Fire Chiefs. He is a past president of the Veterans of Safety and a director of National Sales Executives, Inc.

—*To page 78*

ACCO products

ACCO Registered* Wire Rope Slings



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• These four basic types give you the right sling for any kind of service. Each incorporates the extra safeguards which make ACCO *Registered** the safest slings you can buy.

Each component is first individually tested—must prove to have strength at least equal to the sling body. After precision assembly according to carefully engineered designs, each completed sling is individually proof-tested at twice the load-carrying capacity for which it is rated.

Your guarantee of these extra safeguards is the coveted ACCO registration certificate and metal tag. You'll find it on each of these four types of ACCO *Registered** Slings:

Strand-Laid—Characterized by greatest strength for any diameter and weight, greatest resistance to cutting, crushing, and abrasion. Have ACCO DUALOC endings. For bridle or choker slings, applications where strength is at a premium.

Cable-Laid—Combine the strength of steel with the flexibility of manila rope. Special construction gives extreme flexibility, freedom from crankiness, resistance to kinking. Have ACCO DUALOC endings. For all applications requiring extreme flexibility and freedom from crankiness.

6-Part Braided—Provide wide bearing between sling and load. Combine extreme flexibility and freedom from crankiness with high resistance to cutting and lowest strength loss under severe bending. For applications requiring extra precautions against slippage or marring surfaces on load, or involving extremely sharp bends.

8-Part Braided—Sling bodies are free from internal stresses for maximum ease of handling, extreme flexibility in all planes. Give highest resistance to spinning under load, low strength loss under severe bending. For applications requiring maximum protection against loads spinning, or extreme flexibility in higher strength slings.

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Better Value

Sanitation Assn. Elects Officers

THE INDUSTRIAL Sanitation Management Association has elected the following officers:

President—Sydney Brierly, Eastman Kodak Co., Rochester, N. Y.; Vice Pres.—Daniel Granato, Sharp & Dohme, Inc., Philadelphia; Treasurer—E. D. Ingalls, Hoffman-LaRoche, Inc., Nutley, N. J.; Secretary—John Powell, Powell Magazines, New York City.

The aim of the Association is to crystallize and more forcefully bring to the attention of management the important role sanitation plays in industry as a separate function of management. The Association has chapters in the East, Midwest, and West Coast.

A committee, headed by John Wright of Lederle Laboratories, was set up to revise the by-laws regarding eligibility for membership, since it was felt that supervisors and foremen of sanitation, as well as department heads, should be eligible.

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Obituary

ROBERT W. BLACK

ROBERT W. BLACK, chief safety engineer for the Esso Standard Oil Company, died July 3 after a long illness. He had been on sick leave since November from the company's refinery at Linden, N. J. He was 63.

Mr. Black joined Standard Oil in 1920, working on safety and fire prevention engineering. In 1930 he was appointed chief safety engineer. He administered safety programs for Esso's marketing and manufacturing facilities from Maine to Louisiana and for the Tuscarora Pipe Line Company, a subsidiary.

Mr. Black was a past chairman of the Petroleum Section of the National Safety Council and one of the original members of the New Jersey chapter of the American Society of Safety Engineers. He was a member of the American Petroleum Institute and the President's Conference on Industrial Safety and Fire Prevention.

Surviving are his widow, Mrs. Phyllis Black; a daughter, Mrs. J. D. Patterson, and two grandchildren, all of Downers Grove, Ill.

SAFETY ENGINEER POSITION OPEN

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ASSISTANT LABORATORY SAFETY ENGINEER

Large, modern laboratory in Western New York with diverse chemical and mechanical projects desires recent graduates with interest in safety engineering. Some experience desirable but not mandatory. Engineering degree preferred. Send resume of education and experience to: Linde Air Products Company, a Division of Union Carbide and Carbon Chemical Corp., P. O. Box 44, Tonawanda, N. Y., Attention: Mr. Paul I. Emch.

Announce Sixth Conference on Standards

Government and industry leaders will join forces in a public discussion of their relative roles in standardization at the Sixth National Conference on Standards in Washington, D. C., October 24-26. Subjects to be covered will range from legal implications of standardization to coordination of Defense Department and industry requirements for manufactured products.

The National Bureau of Standards and the American Standards Association are co-sponsoring the three-day conference which will be held at the Sheraton-Park Hotel. The Program Committee, under the chairmanship of Dr. A. T. McPherson, associate director of NBS, has assembled a group of outstanding speakers who will focus on the conference theme of cooperation between industry and government departments and agencies in the field of standardization.

The 37th Annual Meeting of the ASA will open the conference on October 24. The year's progress in the development of American Standards will be reviewed by Vice Admiral George F. Hussey, Jr. (USN (ret.)), managing director of the American Standards Association and Arthur S. Johnson, vice president, American Mutual Liability Insurance Company of Boston, chairman of ASA's Standards Council.

A series of exhibits will show how both government and industry organizations participating in the Conference are coordinating their standards programs.

Further details, programs and registration forms may be obtained by writing the American Standards Association, 70 East 45 Street, New York 17.

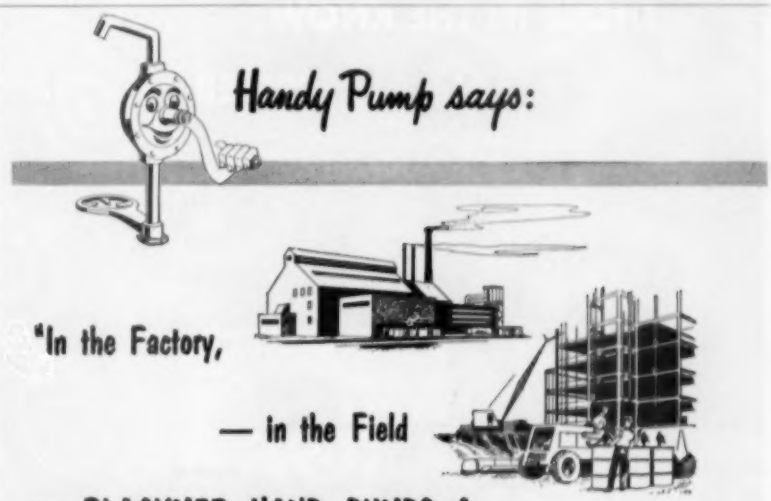
Radioactivated Surfaces Aid Study of Wear

RADIOACTIVATION of surfaces has been successfully used in evaluation of wear produced by friction between rubbing surfaces during short periods of service, it was disclosed at the recent semiannual meeting of The American Society of Mechanical Engineers in Boston.

The method was said to be applicable to studying wear on tools, gears, rams, and even automobile tires. Its use in studying the wear of die faces during hot extrusion of steels was reported by B. J. Jaoul, Ecole National Superieure des Mines de Paris. This nondestructive method enabled study of wear under severe conditions where the temperature of steel billets may be as high as 2400 F. and pressure on the die is about 140,000 pounds per square inch.

The techniques permitted precise determination of the location of wear. Weak points and the concentrations of frictional forces could be determined when the amount of wear was extremely small. It was possible to observe and weigh particles of the abraded die with an accuracy of about one-millionth of a gram (or about 2.2 billionths of a pound). Thus it was possible to evaluate the influence of temperature, ingot surface, rate of extrusion, die surface and lubricant, and other variable factors on wear. The method revealed the mechanism of die wear and the best shape for minimizing die wear and increasing die life.

Radioactivation was accomplished by exposing the die, which was made of 10 per cent tungsten tool steel, for about two days to



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the neutron stream of an atomic pile. As a result the tungsten became radioactive to the extent of about 1.5 mc per gram. Readings had to be determined quickly because the degree of accuracy decreases by half each day. Radioactive particles lost by the die were found on the extruded bars.

Copies of the paper, No. 55-SA-24, may be obtained at 50 cents each from ASME, 29 W. 39th St., New York 18.

University Course on Materials Handling

The Society of Industrial Packaging and Materials Handling Engineers' 1955 "Short Course" will be held September 19-21 under the joint sponsorship of the Society and New York University at NYU's College of Engineering, 191st Street and University Avenue, New York. Plans for the Course have been developed over a period of six months by a committee headed by Dean Wilbur McKee of the University and Allyn C. Beardsell of Container Laboratories, Inc.

Subjects to be covered will provide engineers with an intensive review of the basic technical principles used in packaging and materials handling, a survey of modern application of these principles, a summary of recent developments in the field and reports of research projects now underway to provide continued progress and constant improvement. The Course will also include a one-day session of special interest to management, pointing out the relation of packaging and materials handling engineers to other departments within an industrial organization. In addition, there will be a one-day conference on consumer packaging and its importance to modern merchandising.

The 1955 Short Course will be the most comprehensive in SIPMHE's 10-year history. Mr. Beardsell points out that the Society's planning committee, of which he is chairman, has endeavored to have this year's Course cover every aspect of the field.

Along with its Short Course, the Society is holding its annual Industrial Packaging & Materials Handling Exposition at Kingsbridge Armory, close to NYU's Engineering campus.

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Laboratory Studies Safer Auto Design

On the eve of the July 4 holiday weekend (that claimed hundreds of lives on the highway) the Cornell Aeronautical Laboratory in Buffalo announced that it would attempt to design an automobile body that would be much safer for the passengers in the event of a crash. The Laboratory hopes that it can come up with a vehicle that is able to take a severe head-on accident without injury to the occupants.

The research project is being sponsored by the Liberty Mutual Insurance Company of Boston. Frank J. Crandell, chief engineer of Liberty Mutual signed a new contract with the Laboratory. Representing C.A.L. was Edward R. Dye, head of the Laboratory's

Industrial Division, an authority in auto crash safety work.

"This will be strictly a paper study and for the moment we have no plans to construct a 'crashproof' car," Dye said. "We will try to incorporate findings of the Laboratory's research in the last three years into the design of a full scale auto body which will better protect auto occupants."

As an adjunct to many years of work in airplane crash safety, the Laboratory applied its knowledge to automobiles. Research included the simulation of actual crashes with a full size auto so that engineers could study the flight paths of the dummy occupants. The Laboratory established automobile seat belt design criteria which have been widely acclaimed.

"This 'car of tomorrow' is not the type of auto that will be rushed into production," Dye said. "What we hope to do is interest the public and auto manufacturers in many of the safety innovations that are possible."

Steering wheels. Among the more radical of Dye's recommendations is the elimination of the steering wheel in favor of levers on either side of the driver.

"In a crash, a steering wheel can become a deadly harpoon to the driver's chest," he explained.

A dash panel that pulled out and "wrapped around" the driver of the car would prevent his being thrown forward into the windshield or other obstruction if a crash occurred.

Padding material would be installed in areas where the head might impact since three out of four auto deaths are caused by head injury.

Reinforcement for the automobile's body. Additional steel would encompass the mid-section of the car, preventing its collapse when rolled over.

New types of locks would secure the door from opening and spilling passengers.

Instruments would be located close to the level of the car's hood and would show only colored panels—as some autos do now—in an effort to prevent driver distraction.

Visibility studies may result in a relocation of the driver to a spot where he can see and control the car better.

Side bumpers to increase structural stiffness also are a consideration.

Reshaping the interior for better passenger protection.

"All of these ideas are preliminary. Our final decisions will depend upon our design study," Dye said. "The driving public, if it wants safer cars, must eventually reverse its present philosophy of spaciousness in the auto to one of compactness. Proper packaging will greatly reduce the possibility of injury and death."

He emphasized that the design study should not raise the hopes of anyone driving today, since final development is years away.

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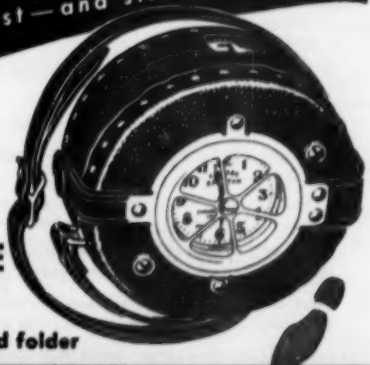

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THE READERS' POINT OF VIEW

Comments on topics of current interest are invited. They need not agree with the editors' opinions.

The Diary of an S. E.

ROTAN, TEX.—So many of us go through life enjoying the works of others and never acknowledge the fact to them. Bill Andrews' *Diary of a Safety Engineer* has prompted me on several occasions to write and tell how much I enjoy reading his very fine writings.

These stories are so true to life and cover the troubles—and, mind you, the weaknesses—of safety men that I have grown to feel that the main character is an old acquaintance and Jackson-Barnes is a plant nearby. I notice by the latest installment that the safety engineer is changing to Exsteel Company and I am anxious to receive the next articles to learn how he does in this new experience.

This article has been my first interest when opening each month's NATIONAL SAFETY NEWS. I want you to know that I enjoy it immensely and have also received much value and help from it. Keep up the fine work!

L. C. AWALT,
Safety Supervisor
National Gypsum Company

Alcoholism

ALEXANDRIA, VA.—I have read with interest "Dollars on the Scrap Pile—The Alcoholic in Industry," by Edward L. Morris in the July issue.

I should think it would be good business to spend as much money and effort to *prevent* alcoholism as to help cure the disease that costs industry (according to Mr. Morris) more than a billion dollars a year.

JENNIE L. MILSTER
(Mrs. B. G. Milster)

Paris, France—Will you be kind enough to send us by return mail a copy of your April 1954 issue? We are especially interested in an article on alcoholism by Dr. R. B. Reeve.

GERARD DIDIER, Asst. Manager
Les Editions de l'Enterprise Moderne.

Copy has been sent. Alcoholism seems to be a world-wide problem.

Problems

LOS ANGELES—Reviewing the April issue caused me to discover that I had not read the article, "Got a Problem?" by Paul W. Beedle. It is so positive in content as to warrant enthusiastic acceptance.

The writer has been in the field of industrial safety since 1922 with such companies as Sinclair Oil Company, Aramco Oil Com-

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pany, and Douglas Aircraft Company.

Please convey to Mr. Beedle the writer's regards for his timely comments. His references to human relationship and the financial approach, eliminating personalities, are "lean meat" for the novice in industrial safety work.

E. W. TIPTON

We're Sorry

THE NAME of Edwin S. Smith was inadvertently omitted in the listing of assignments of field service representatives in the July issue of the NEWS.

Mr. Smith is in charge of the Field Service Department work of the New York office and is assigned as district representative for New York and Pennsylvania. His address is 800 Chrysler Building, New York 17.

Candid Photography

Snapshots of unsafe work practices in company publications and on bulletin boards provide effective reminders to employees. One afternoon at quitting time the safety director of a large plant got up on the roof and took a few shots of employees making a reckless dash for cars and buses.

The pictures appeared in the plant paper along with a tabulation of jaywalking accidents.

COMING EVENTS

In the Field of Safety

Sept. 13-15, Cleveland, Ohio

Seventeenth Annual Ohio State Safety Conference and Exhibit (Hotel Carter). Michael L. Stefani, general manager, Cleveland Safety Council, 2073 East 9th Street, Cleveland 15, Ohio.

Sept. 15-16, Harrisburg, Pa.

Pennsylvania Department of Labor and Industry Annual Industrial Safety Conference (No exhibits). John R. Torquato, secretary, Dept. of Labor and Industry, Harrisburg, Pa.

Sept. 15-16, York Harbor, Me.

Twenty-eighth Annual Maine State Safety Conference (Marshall House). Arthur F. Minchin, secretary, Department of Labor and Industry, State House, Augusta, Me.

Oct. 17-21, Chicago

Forty-third National Safety Congress and Exposition (Conrad Hilton Hotel). R. L. Forney, secretary, National Safety Council, 425 N. Michigan Ave., Chicago 11.

Nov. 3-4, Charleston, S. C.

Eighteenth Annual South Carolina Accident Prevention Conference (Francis Marion Hotel). J. Donald Watson, Jr., secretary-treasurer, P.O. Box 539, Columbia, S. C.

Jan. 19-20, Milwaukee, Wis.

Wisconsin Council of Safety, Midwinter Safety Conference and Exposition. (Hotel Schroeder). R. W. Gillette, executive secretary-treasurer, Wisconsin Council of Safety, 1 West Wilson Street, Madison 2, Wis.

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Avoiding The Kickback

Straight-edging rip saw operating in the plant of the Mengel Company, Louisville. A considerable portion of the rip saw table is encircled with auxiliary wood tables to facilitate handling of short stock. The grilled guard which covers the rear end of the feed chain extends horizontally from the rear end of the roll housing, at the left. Photograph by Mattison Machine Works, Rockford, Ill.

MANY MEN have been seriously injured by material kicking back at the rip saw. In the old days, it was not uncommon for men new at woodworking to be seriously injured by kickbacks. Since development of the modern straight-edging rip saw, less danger is involved. However, the hazard is still present wherever material is being ripped at a hand-feed rip saw and where a standard type of blade is used.

On modern straight-edging rip saws, material being processed is continually and positively held between pressure rolls and feed chain while it is in contact with the running saw blade. When it emerges from the rear end of the machine, it is carried completely clear of the saw blade, so no kickback is likely to occur. Moreover, edgings also tend to be carried directly back away from the saw blade, especially where a single-chain straight-line saw of overcutting type is being employed.

However, edgings have occasionally turned over when ripped narrower than thickness of material being processed, and have then kicked back. To eliminate danger from this source, some modern straight-edging rip saws are provided with a set of narrow steel fingers, which prevents slivers or edgings from being thrown back toward the operator. The feed rolls are completely enclosed except for the slight necessary downward projection below the housing, required to take care of variations in stock thickness. The saw blade is fully enclosed on front and top.

At the rear of the machine, attached to the back end of the roll housing, a grilled metal guard extends out over the chain, so the offbearer cannot come in contact with it. Also, a patented swinging rear guard, which is in effect a part of the rip saw table, prevents edgings from wedging between the chain and the guard at the rear of the saw to cause trouble or damage. This swinging guard is spring-loaded. When it swings back to allow debris or edgings to fall through, it does so against resistance of an extension spring. This spring automatically returns the guard to normal position afterward.

The kickback fingers are located in the roll housing on the infeed side of the blade. The fingers normally hold a position down against the running chain when no stock is passing through the machine.

Competition

—*From page 25*

course, through an act of God.

The introduction of dynamics, as represented by movement, such as congestion, cross-overs of men and equipment, high-speed free-swinging loads, material storage areas, and truck routing, provide accident-producing conditions.

The second general accident-inducing factor is failure of temporary structures such as forms, scaffolds, ramps, ladders, cofferdams, or sheeted cuts. Whenever any of these are inadequately designed, failure or collapse is possible.

A frequent condition, often ignored, is the high stresses that materialize during construction. It is not unusual to find that, although the design may indicate a factor of safety of three, four, or more, the actual field stresses reduce or destroy any safety factor provided. For example, in the design of cofferdams, it is essential to consider the high stress developed in the sheeting *before* the last ring has been placed.

The third general grouping is inherent engineering hazards. Perhaps the most important of these results from the use of explosives. Others arise from the presence of injurious gases and toxic dusts.

Whenever explosives are used, there is always the possibility of premature explosion or misfire as a result of negligence. In confined operations such as tunneling, accumulations of gases from the use of gasoline or diesel-powered equipment may cause serious pulmonary injuries.

The exposure, of course, varies with the efficiency and capacity of the ventilation system. During extensive rock drilling, any uncontrolled accumulation of dust becomes a serious inherent hazard.

The fourth and final group of accident-inducing factors involves unsafe practices of individual workers, or personal hazards. Although accidents in this group are generally minor in nature, their frequency of occurrence is often high.

Control of accidents in this cat-

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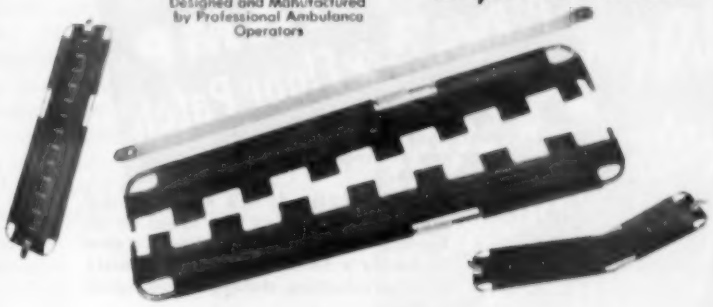

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5554

egory is a matter of education, which is the responsibility of management. One of our functions is to assist contractors in developing safe practices commensurate with the type of construction.

This then is a general outline of the advanced analysis. Following this analysis the studies are carried further by including the application of fundamental engineering principles through the use of specially designed instruments. These instruments assist in the detection of inherent failure points.

It is important to keep in mind, that if a contractor wants a safe job, two things must be done; (1) the forces produced by the method of operation must be determined, and (2) they must be determined in advance of the operation, for a partial or total failure may produce severe or fatal injuries, not to mention damage to property.

A close study of basic causes of accidents reveals that most accidents are controllable. This fact alone should serve as an inducement to develop a sound safety program. It is management's duty to formulate such a program—and to support it.

As a guide to management we have developed an eight-point basic plan, which has been received with considerable favor by contractor policyholders.

Essential points are:

1. Sustained management support and direction
2. Adequate safety organization
3. Active participation by superintendents and foremen
4. Effective employee education
5. Control of accident hazards by:
   - (a) Evaluation of construction jobs
   - (b) Establishment of safe methods and good practices
   - (c) Safeguarding equipment and machines
   - (d) Control of exposure to occupational disease
   - (e) Provision of personal protective devices
6. On-the-job medical program
7. Inspection on construction jobs

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8. Investigation of accidents

Construction is an old industry which has played a major part in bringing our country to the leading position it holds in the world today. But its accident record is a challenge to every one of us.

It cannot be improved through hit-or-miss methods.

It cannot be improved by leaving the problem to chance.

What must be done is to establish an intelligent over-all safety program that is accepted and practiced by the entire staff. Above all, it must be an integral part of the engineering knowledge and practice involved.

Home Safety Featured In Sunday Supplement

Home safety got a two-page picture story in the Sunday magazine section of the Grand Rapids, Mich., *Herald* under the by-line of Miss Hope Connor, editor of *Diesel Equipment Bulletin*, published by the local plant of General Motors Diesel Equipment Division.

Selecting the home of a Diesel Equipment Division employee, Safety Director Paul Harris with reporter and photographer, paid the family a visit. Apparently safety lessons learned on the job had been carried home and the housewife knew the essentials of keeping the home safe. However, she consented to pose for some pictures showing what *not* to do at home.

Plant Too Hot?

When people come to work and find the plant or office hot and stuffy, they start the day wrong and efficiency as well as comfort suffer. Short of air conditioning, there are ways of reducing temperature, like this one reported in *Factory Management and Maintenance*.

At 6 a.m. on summer mornings the B. F. Goodrich Company opens windows in its Akron buildings and lets in the cool morning air. To keep dust from blowing in, dust and dirt sources outside the plant are flushed down with water each night.

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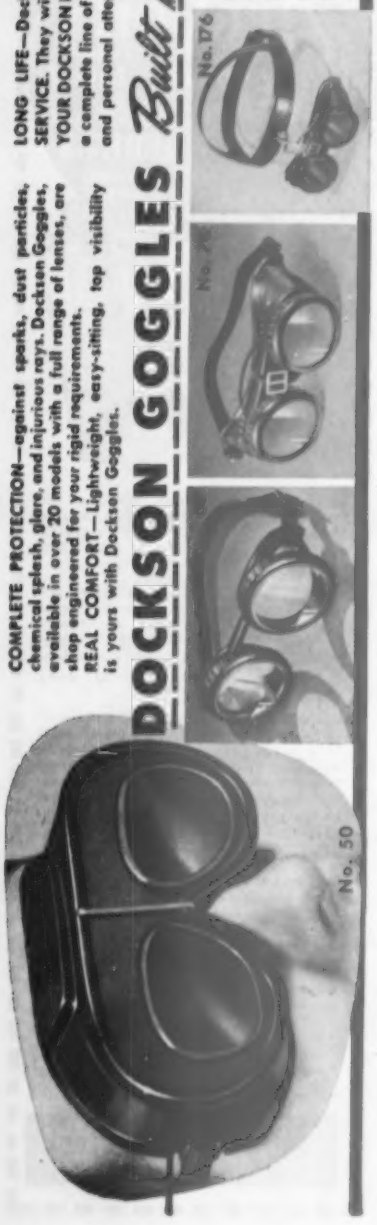

Wire from Washington

—From page 10

constitute a threat to the health and welfare of our citizens; and (2) that the resources of the Food and Drug Administration are woefully inadequate to discharge its present responsibilities." The Committee made a series of specific recommendations to cope with the problems involved.

Intergovernmental Relations. The Commission on Intergovernmental Relations, set up by law, submitted its final report to the President and to the Congress. It dealt largely with the basic questions of the fiscal and program relationships among the Federal, state and local governments, and commented upon a wide range of Federal grant-in-aid programs to the States. Among its recommendations, it proposed with one modification, that Federal aid for airport construction be continued on the present basis of National-State-local cost sharing. One of its justifications for this proposal was that "the device of Federal grants-in-aid facilitates central control of airport design, thus contributing to the safety of civil aviation."

The Commission's recommendation on Federal-aid-to-states for highways differed from the Administration's highway proposals; it recommended continuance of the present Federal aid program and an increase of appropriations for that purpose. In a dissent from this conclusion, joined by four State governors among others, the dissenter said, in part: "We are deeply impressed by the persuasive argument of the President that this Nation mobilize all its forces to arrest the terrible traffic toll upon human life," and therefore recommended a different financing technique. As to water pollution abatement, the Commission recommended that the Federal government provide technical and financial assistance as a stimulus to further action.

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Safety Library

—*From page 42*

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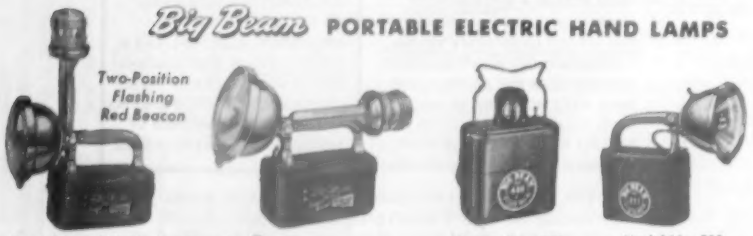

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—*From page 8*

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The handle, too, is made extra long for greater leverage and so that the operator can stand a safe distance from the door.

Takes Rough Treatment

Widely used throughout industry, the B & J Safety Friction Wrench is a superior tool that stands up under rough treatment. Its simple design eliminates constant repairing—no springs, bolts or ball bearings to cause trouble; no pawls or triggers to catch. It will give years of safe satisfactory service. The B & J Safety Friction Wrench fits 2-inch square of door-opening gear. Special sockets available for other sizes. For cars with recessed squares, specify wide angle model.

See for yourself how the B & J Safety Friction Wrench saves time and increases safety. Order now. Immediate delivery. SAFETY FIRST SUPPLY COMPANY, 425 Magee Street, Pittsburgh 19, Pa.

United States Navy Department, Six awards: Charleston Naval Shipyard; M.S.T.S. LANT G26; M.S.T.S. NORTH PAC G23; New York Naval Shipyard; Puget Sound Naval Shipyard; U. S. Naval Ordnance Plant, Indianapolis.

U. S. Pipe & Foundry Co., North Birmingham (Ala.) Pipe Plant.

U. S. Steel Corp., Oil Well Supply Division, Imperial Works, Oil City, Pa.

Western Electric Co., Inc., Haverhill (Mass.) Shops.

Wisconsin Public Service Corp., Green Bay.

AWARDS OF MERIT

Allen Industries, Inc., Central Office, Detroit.

Aluminum Co. of America, Cleveland Works.

American Can Co., Four awards: Halethorpe Factory; Hoopeston (Ill.) Factory; New Orleans Factory; Sacramento Factory No. 91A.

American Greetings Corp., Cleveland, Entire company.

Appalachian Electric Power Co., Roanoke, Va., Entire company.

Atchison, Topeka & Santa Fe Railway System, Six awards: Colorado Division; Gulf Division; Plains Division; San Bernardino Shops; Topeka Shops; Western Division.

Atlantic Coast Line Railroad Co., Wilmington, N. C., Maintenance of Equipment Division.

Beech Bottom Power Co., Inc., Power, W. Va., Entire company.

W. S. Bellows Construction Corp., Houston.

Bethlehem Steel Co., Johnstown Works.

Cabot Carbon Co., Canal Plant, Pampa, Texas.

Canadian Car & Foundry Co., Ltd., Longue Pointe Works.

Carbide & Carbon Chemicals Co., Paducah (Ky.) Plant.

J. I. Case Co., Rock Island (Ill.) Works.

Celanese Corp. of America, Three awards: Amcelle Plant; Celriver Plant; Chemcol Plant.

The Champion Paper and Fibre Co., Texas Division.

Chicago, Burlington & Quincy Railroad Co., Three awards: Denver Terminal; Locomotive Shops; Passenger Car Shop.

Chrysler Corp., Four awards: Airtemp Division, Dayton; Chrysler Axle Plant; Chrysler MoPar Plant; Jefferson Plant.

Community Public Service Co., Fort Worth, Entire company.

Consolidated Electric & Gas Co. of N. Y., Atlanta (Ga.) Gas Light Co.

Consolidated Paper Corp., Ltd., Laurentide Division, Grand'Mere, Quebec, Canada.

Consumers Public Power District, Columbus, Nebr., Entire company.

Continental Foundry & Machine Co., Pittsburgh Works.

Crown Cork & Seal Co., Inc., Machinery Division, Baltimore.

The Dixie Traction Co., Covington, Ky., Entire company.

Douglas Aircraft Co., Inc., El Segundo (Calif.) Division.

Dravo Corp. & Subsidiaries, Neville Island, Pittsburgh.

E. I. du Pont de Nemours & Co., Twelve awards: Arlington Works; Baltimore Plant; Chicago Plant; East Chicago Works; Eastern Laboratory; Flint Plant; Fort Madison Plant; Indiana Ordnance Works; Mechanical Development Laboratory; Polychemicals Research Laboratory; Rochester Plant; Victoria Plant.

Duquesne Light Co., Pittsburgh.

Ethyl Corp., Manufacturing Department, Baton Rouge.

Equitable Gas Co., Pittsburgh.

Fall River (Mass.) Gas Works Co., Entire company.

Ferro Corp., Cleveland Plant.

Ford Motor Co., Fifteen awards; Aircraft Turbine Plant, Detroit; Blast Furnaces & Coke Ovens; Brooklyn Plant; Central Parts Depot, Livonia, Mich.; Fargo Parts Depot; General Parts Depot; Houston Parts Depot; Los Angeles Assembly Plant; Manchester Plant; Memphis Assembly Plant; Monroe Plant; Omaha Parts Depot; Richmond Assembly Plant; Steering Gear and Machining Plant; Transportation.

Fort Sam Houston Ordnance Section, Texas.

Fruin-Colnon Contracting Co., St. Louis.

General Electric Co., Two awards: Aircraft Gas Turbine Division, Cincinnati; Research Laboratory, Schenectady.

General Foods Corp., Carton & Container Division, Battle Creek.

General Mills, Inc., Mechanical Division, Minneapolis.

General Refractories Co., Baltimore Plant.

Great Northern Railway Co., Two awards: Cascade Division; Spokane Division.

Harbison-Walker Refractories Co., Fulton Works, Pittsburgh.

Harrisburg Railways Co., Harrisburg, Pa., Entire company.

Idaho Power Co., Boise, Entire company.

Illinois Central Railroad, Paducah Shop.

Got
DUST STORM THROAT?

YOU NEED A . . .
DUPOR No. 4

The respirator that's made to order for protection against dust, fumes and paint spray! Has everything, and more than you will find in units costing twice the price! Double filters; soft rubber face mask; sanitary face cloth; exclusive Dupor valves for controlled breathing; panorama vision! Economical protection that you cannot afford to be without! Write for sample, $2.00 postpaid!

H. S. COVER, SOUTH BEND, IND.
"Respirators for Industry since 1894"

"SANKEY" IMPROVED FOOT GUARD

Equipped with NEW Rubber Strap and NEW Heavy Duty Anti-Skid Rubber Sole

The metal shield (above) is designed to furnish a maximum amount of protection to the entire front of the foot—not merely the toes alone, but also to the instep against hazards from falling, rolling or flying objects, or from accidental tool blows.

- Absolute freedom of leg motion, utmost protection and comfort come with the leg-contour shaped "Sankey" fibre shin guard (right).
- Fibre knee-shin guard (right) provides flexible knee movement on jobs with both knee and shin hazards.

For more information write today

ELLWOOD SAFETY APPLIANCE CO.

219 SIXTH ST., ELLWOOD CITY, PA.

the new basic material, all in one piece (including channels), not welded, riveted or expanded in steel or aluminum, in standard sizes and gauges. Safety GRIP-STRUT presents an open space, in a diamond pattern, in excess of 55% of the area for ready access of light and air and gives a positive NON-SKID footing in all directions. Ideal for work platforms, stair and ladder steps, flooring, balconies, catwalks, machinery guards, fire escapes and for original equipment safety treads.

Important Safety Features

- ★ Fire proof
- ★ Slip proof
- ★ Maximum strength
- ★ Minimum weight
- ★ Easy to stand on
- ★ Cool in summer—warm in winter

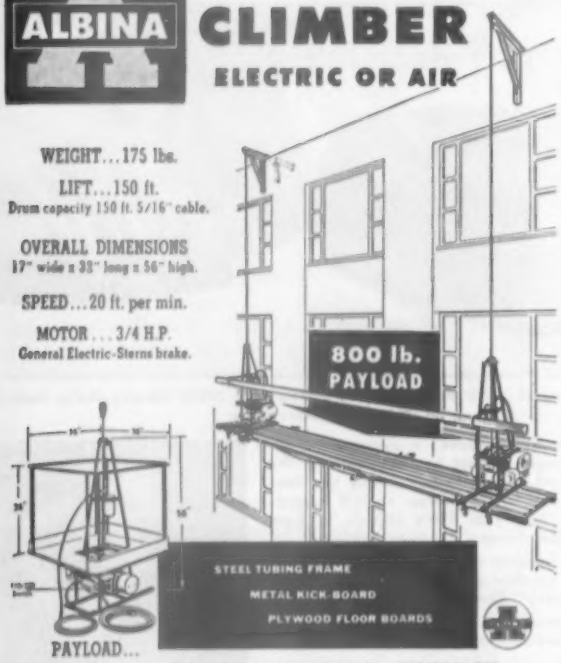
Big Economy Features

- ★ For balconies—no extra light needed below—no extra heat.
- ★ No extra supports necessary—channels are integral part of the material
- ★ No secondary sprinkler heads needed
- ★ Self-cleaning
- ★ Cut and installed like lumber by your own maintenance force
- ★ Low in original cost

Distributors in all principal cities. Consult yellow pages in phone book under "GRATING."

GRIP-STRUT division
THE GLOBE COMPANY • *Manufacturers since 1914*
4018 S. PRINCETON AVE. • CHICAGO 9, ILL.

ALBINA CLIMBER
ELECTRIC OR AIR



SALES • RENTALS • SERVICE IN ALL PRINCIPAL CITIES

ALBINA ENGINE & MACHINE WORKS
2100 N. ALBINA AVENUE • PORTLAND, OREGON

International Silver Co., Meridan, Conn.

Iowa Rural Electric Cooperative Association, Des Moines, Entire company.

Jones & Laughlin Steel Corp., Electricweld Tube Division, Oil City, Pa.

Kansas City (Mo.) Public Service Co., Entire company.

Kearney and Trecker Corp., Milwaukee, Entire company.

Kellog Co., San Leandro (Calif.) Plant.

Lever Brothers Co., Baltimore Plant.

Linde Air Products Co., Two awards: Construction & Design Department; Linde Air Products Co.

Manchester (N. H.) Transit, Inc., Entire company.

The Mead Corp., Chillicothe (Ohio) Division.

Memphis Light, Gas & Water Division, Entire company.

Metropolitan Utilities, Omaha, Entire company.

Michigan Carton Co., Battle Creek, Entire company.

Monsanto Chemical Co., Seattle Plant, Plastics Division.

Montana-Dakota Utilities Co., Minneapolis, Entire company.

Montgomery Ward & Co., Three awards: Chicago Retail Stores; Denver Mail Order House; Fort Worth Mail Order House.

NACA Ames Aeronautical Laboratory, Moffett Field, Calif., Entire company.

National Biscuit Co., Two awards: Los Angeles Bakery; Portland Unit.

National Cylinder Gas Co., 19th St. Plant, Cicero, Ill.

National Distillers Products Corp., K. D. & W. Plant.

National Lead Co., Two awards: Pottstown Plant; Titanium Division.

Norfolk and Western Railway Co., Norfolk General Agency.

North American Cyanamid, Ltd., Ingersoll Quarry Division.

Northern Indiana Public Service Corp., Hammond, Entire company.

Norton Co., Abrasive Division, Worcester, Mass.

Ohio Power Co., Canton, Entire company.

Oklahoma Gas & Electric Co., Oklahoma City, Entire company.

Pacific Press, Inc., Los Angeles, Entire company.

Philadelphia Electric Co., States of Pa. and Md.

Pillsbury Mills, Inc., Clinton (Iowa) Unit.

Potomac Electric Power Co., Washington, D. C., Entire company.

Radio Corp. of America, Two awards: Morristown (N. J.) Engineering Plant; Television Division, Bloomington, Ind.

Ravenna Arsenal, Inc., Apco, Ohio, Entire company.

Republic Steel Corp., Six awards: Bolt & Nut Division, Cleveland; Cleveland District; Elyria Plant, Steel & Tubes Division; Pressed Steel Division, Niles (Ohio) Plant; Pressed Steel Division, Stevens Plant, Niles; Steel & Tubes Division, Cleveland Plant.

Rohr Aircraft Corp., Riverside (Calif.) Plant.

Scott Paper Co., Cut-Rite Division, Sandusky, Ohio.

The South Coast Corp., Oaklawn Sugar Factory, Franklin, La.

Southern Natural Gas Co., Birmingham, Entire company.

Southern Paperboard Corp., Fort Wentworth, Ga.

Speer Carbon Co., St. Mary's (Pa.) Plant.

A. E. Staley Manufacturing Co., Decatur (Ill.) Plant.

Texas Electric Service Co., Fort Worth, Entire company.

Union Bleachery, Greenville, S. C., Entire company.

United Light & Railway Service Co., Iowa-Illinois Gas & Electric Co., Davenport.

United States Navy Department, Five awards: Boston Naval Shipyard; Long Beach Naval Shipyard; Norfolk Naval Shipyard; Philadelphia Naval Shipyard; San Francisco Naval Shipyard.

U. S. Rubber Co., Naugatuck Chemical Division, Kankakee Unit, Joliet (Ill.) Arsenal.

U. S. Steel Corp., Four awards: Annandale Limestone Mine; Frick District, Coal Division, Bridgeport Mine; Maxwell Mine; Robena Mine.

University of California, Los Alamos Scientific Laboratory.

Washington (D. C.) Gas & Light Co.

Wisconsin Power & Light Co., Madison, Entire company.

Wisconsin Public Service Corp., Green Bay, Entire company.

Wise Potato Chip Co., Berwick, Pa., Entire company.

Yale & Towne Manufacturing Co., Materials Handling Division, Philadelphia.

CERTIFICATES OF COMMENDATION

Acme Visible Records, Inc., Crozet, Va., Entire company.

Alcoa, Cooking Utensil Division, Chillicothe, Ohio.

American Brake Shoe Co., Four awards: Brake Shoe & Castings Division, Chicago; Engineered Castings Division, Medina, N. Y.; National Bearing Division-Clearing, Chicago; Ramapo Ajax Division, East St. Louis, Ill.

American Can Co., Two awards: Chatham Factory No. 48-A; Engraving & Process Plate Division, Chicago.

American Radiator & Standard Sanitary Corp., Tonawanda Iron Division, North Tonawanda, N. Y.

Arizona Chemical Co., Two awards: Pinane Plant and Splitting Plant, Panama City, Fla.

Atlantic Coast Line Railroad Co., Property Protection Department.

Barium Products, Ltd., Modesto, Calif.

Bay West Paper Co., Green Bay, Wis., Entire company.

Cabot Carbon Co., Nine awards: Canal Plant; Dixon Plant, Big Spring, Texas; Estes Plant, Wickett, Texas; Hobbs (N. M.) Plant; Kermit (Texas) Plant; Keystone Plant; Pampa (Texas) Office; Schafer "B" Plant, Pampa; Walton Plant, Kermit, Texas.

Certain-teed Product Corp., East St. Louis, Ill.

Sureseal, Surety's unique synthetic for protective apparel has 4 times higher snag resistance, 10 times higher abrasion resistance and highest resistance to most industrial chemicals.

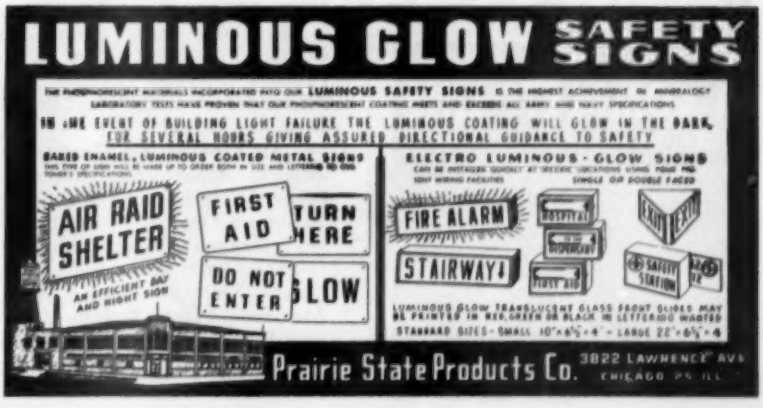
Gloves, sleeves, aprons, leggings and spats made of Surety Sureseal are designed to combine maximum protection with worker comfort and freedom of action.

. . . which adds up to less drain on profits by high safety apparel costs, worker inefficiency and discomfort.

THE SURETY RUBBER CO.
Carrollton, Ohio

Write for Surety Protective Apparel Bulletin with actual samples of Sureseal in various weights and swatches of other synthetics for special service requirements.

In Canada: **Safety Supply Co., Toronto**


LUMINOUS GLOW SAFETY SIGNS
IN THE EVENT OF BUILDING LIGHT FAILURE THE LUMINOUS COATING WILL GLOW IN THE DARK,
FOR SEVERAL HOURS GIVING ASSURED DIRECTIONAL GUIDANCE TO SAFETY
BAKED ENAMEL LUMINOUS COATED METAL SIGNS
ELECTRO LUMINOUS - GLOW SIGNS
AIR RAID SHELTER
AN EFFICIENT DAY AND NIGHT SIGN
FIRST AID
DO NOT ENTER
SLOW
FIRE ALARM
STAIRWAY
Prairie State Products Co.
3822 LAWRENCE AVE
CHICAGO 25 ILL

WHEELER

WHY BE HALF SAFE!

PROTECT YOUR MEN WITH LEG-SAFE LEGGINGS

OFF IN A FLASH!

The safest leggings available! Just grab the side stay anywhere and they're off in a flash. Made in knee length or half-length in asbestos, duck, chrome leather and fibre. Also spring frame styles. A complete line to meet every need. *Your men need 'em! Get 'em today!* Wheeler Protective Apparel, Inc., 226 W. Huron St., Chicago 10, Ill.

LOOK TO WHEELER FOR A COMPLETE LINE OF SAFETY CLOTHING

Send for free copy of the WHEELER BULLETIN featuring everything you need in SAFETY apparel.

Chicago, Burlington & Quincy Railroad Co., Special Agents Department.

City Utilities of Springfield, Mo., Entire company.

Container Corp. of America, Brandywine Park, Wilmington.

The Denver & Rio Grande Western Railroad Co., Special Service Department.

The Dow Chemical Co., Ludington (Mich.) Division.

E. I. du Pont de Nemours & Co., Twenty-one awards: Akron Laboratory; Chattanooga Construction; Chestnut Run Construction; Dresden Plant; Du Pont Works; Ecorse Works; Edge Moor Construction, Everett Plant; Haskell Laboratory; James River Works; Louisville Plant; Newport Construction; Philadelphia Polychemicals Works; Pigments Research Laboratory; Plant Research Laboratory; St. Louis Works; Stine Laboratory; Toledo Electrochemicals Plant; Towanda Plant; Victoria Construction; Wyandotte Plant.

Ford Motor Co., Two awards: Northville (Mich.) Plant; Los Angeles Parts Department.

Gas & Light Co. of Columbus, Ga., Entire company.

General Electric Co., Two awards: Conneaut (Ohio) Base Works; Dover Wire Works, Cleveland.

General Engineering Works, Chicago, Entire company.

General Shoe Corp., Atlanta.

Graniteville Co., Woodhead Division, Graniteville, S. C.

Great Northern Railway Co., Special Agents Department, St. Paul.

Hanna Coal Co., Central Machine Shop, Adena, Ohio.

Harbison-Walker Refractories Co., Casconade Mine.

Jahncke Service, Inc., General Office (All Units), New Orleans.

Johns-Manville Corp., Tilton Unit.

Jones & Laughlin Steel Corp., Five awards: Atlanta Container Division; Bayonne (N. J.) Container Division; New York Warehouse, Long Island City; Philadelphia Container Division; Port Arthur (Texas) Container Division.

Kimberly Clark Corp., Field Service Division, Neenah, Wis.

Linde Air Products Co., Twenty-one awards: Allentown Combination Plant; Altoona Combination Plant; Baltimore Oxygen Plant; Brooklyn Oxygen Plant; Charlotte (N. C.) Combination Plant; Cincinnati Oxygen Plant; Denver Acetylene Plant; Duluth Acetylene Plant; East Buffalo Oxygen Plant; Erie Oxygen Plant; Essington Oxygen Plant; Harrisburg Combination Plant; Kittanning Oxygen Plant; Los Angeles Factory; Mobile Combination Plant; New Orleans Oxygen Plant & Baton Rouge Warehouse; Pittsburgh Acetylene Plant; St. Louis Acetylene Plant; Salt Lake City Oxygen Plant & Pocatello Warehouse; Savannah Oxygen Plant; South Charleston Acetylene Plant.

Monsanto Mexicana, S. A., Entire Manufacturing Operations, Mexico.

New York Wire Cloth Co., Durall Products Division, York, Pa.

Pennsylvania Salt Manufacturing Co., Natrona (Pa.) Unit.

Pittsburgh Plate Glass Co., Springdale (Pa.) Unit.

Price Brothers & Co., Ltd., Kenogami, Province of Quebec.

Ralston Purina Co., Five awards: Amarillo; Jackson, Miss.; Macon, Ga.; Sanitation Products Plant, St. Louis; Wichita.

Republic Steel Corp., Six awards: Canton Screen Division; Ideal Foundry Division, Newton Falls, Ohio; Moline Plant; Union Drawn Steel Co., Ltd., Massillon; Union Drawn Steel Division, Los Angeles Plant; Warehouses Throughout the United States.

F. S. Royster Guano Co., Two awards: Bessemer, Ala.; Macon, Ga.

Schenley Industries, Inc., Two awards: Associated Kentucky Distilleries, Ekron; The George T. Stagg Co., Stamping Ground, Ky.

Superior (Wis.) Water, Light & Power Co., Entire company.

Tennessee Valley Authority, Fort Patrick Dam, Johnson City, Tenn.

U. S. Pipe & Foundry Co., California Works, Decoto.

U. S. Steel Corp., Three awards: Frick District, Coal Division, Everson Shop, Uniontown, Pa.; Michigan Limestone Division, Buffalo Plant; Oliver Iron Mining Division, Morris Open Pit Mine, Hibbing, Minn.

The defendant was charged with imbibing too freely.

"Your Honor," said the officer, "I stopped to give this man a ticket for overtime parking and found him very excited. Said he couldn't move his car — thieves had stripped it of steering wheel, brake, clutch and gas pedal."

"And what are the facts?" asked the judge.

"Well," said the officer, "he was in the back seat."

For a More Successful Poster Program

POSTER program aids miniatured on this and the following pages are NEW — shown here for the first time. Those illustrated in one color on the following two pages are actually printed in two or more colors.

For maximum variety, refer to the 1955 Directory of Occupational Safety Posters. There you'll find 744 top-notch selections on a great variety of subjects. Additional copies of the directory are 50 cents each—write Membership Service, N.S.C.

JUMBO POSTER for OCTOBER 1955

The Jumbo poster, issued monthly, is designed for outdoor use and is available to members on annual subscription but is not stocked. Its actual size is 9' 11" by 11' 8".

SAFETY BANNER FOR OCTOBER, 1955

Here is the attention-getting, monthly cloth banner. Available in two types—indoor and outdoor—both are identical in size (10 feet long by 40 inches high), have the same general message and multi-colored design. Indoor type is of sturdy drill with grommets for easy hanging, while the outdoor banner is of extra heavy drill, with wind vents, and has strong stitched-in rope for durability.

0373-A 8½x11½

This new four color poster is illustrative of the 72 four color posters shown in the 1955 Poster Directory.

Posters below are printed in two or more colors

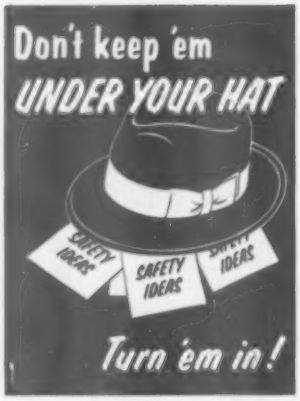
(Available only in sizes indicated)

NATIONAL SAFETY COUNCIL

0552-C 25x38

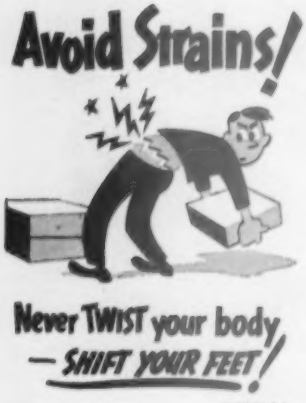
NATIONAL SAFETY COUNCIL

0371-A 8½x11½



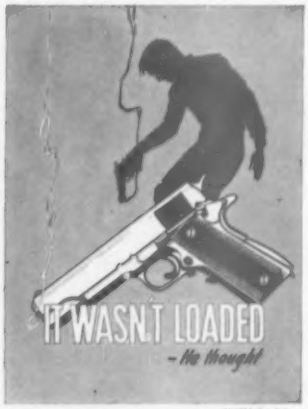
NATIONAL SAFETY COUNCIL

0472-A 8½x11½



NATIONAL SAFETY COUNCIL

0546-B 17x23

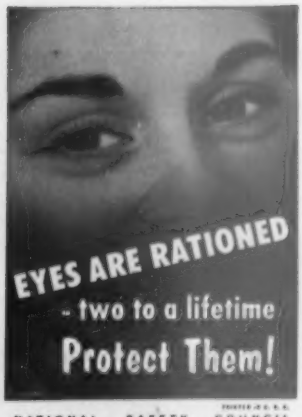


NATIONAL SAFETY COUNCIL

0453-B 17x23
0455-A 8½x11½

NATIONAL SAFETY COUNCIL

0544-A 8½x11½



NATIONAL SAFETY COUNCIL

0380-A 8½x11½

NATIONAL SAFETY COUNCIL

0395-A 8½x11½

NATIONAL SAFETY COUNCIL

0498-B 17x23

Electrotypes of payroll inserts can be furnished in all poster illustrations shown above.

Posters below are printed in two or more colors

(Available only in sizes indicated)

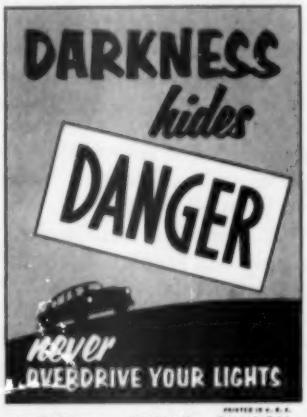
NO WONDER BILL'S MACHINE AIN'T WORKIN'- THE SWITCH WAS OPEN!
TAG AND LOCK SWITCHES BEFORE MAKING REPAIRS!
NATIONAL SAFETY COUNCIL

0400-A 8½x11½

0428-B 17x23

0415-A 8½x11½

0531-B 17x23

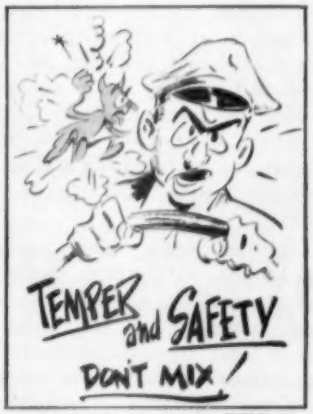


T-0527-C 25x38

T-0528-A 8½x11½

V-0558-B 17x23

V-0559-B 17x23



V-0556-A 8½x11½

V-0557-A 8½x11½

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On-The-Spot **FIRST AID**
. . . when it counts
PAC-KIT®

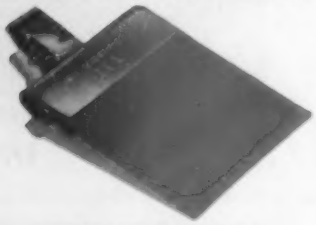
Instantly avails supplies and accessories for emergency care of burns, cuts, bruises, lacerations, superficial eye injuries, uncontrolled bleeding, fainting, fractures and allied injuries common to industry. PAC-KITS are indispensable where shops lack medical facilities.

Average fellow worker can instantly apply any of the various replaceable items contained in the heavy-duty dustproof, moistureproof cabinet.

WRITE TODAY for description of 4 available sizes and prices.

The PAC-KIT Company
P. O. Box 1306 Greenwich, Conn.

DOSIFILM
RADIATION SAFETY BADGE



- **ACCURATE READINGS**
- **LATEST SCIENTIFIC DESIGN**
- **SPLASH PROOF AND LIGHT TIGHT**
- **POSITIVE IDENTIFICATION**

A personnel monitoring service for users of x-ray or isotopes. Monitoring instruments also available. Radiation safety courses conducted—hazard surveys made.

For further information write to Health Physics Department.

R-C SCIENTIFIC
INSTRUMENT COMPANY, INC.
307 Culver Boulevard
Playa Del Rey, California

Standards for Protection Against Radiation

The Atomic Energy Commission has approved a proposed regulation establishing standards for protection of personnel and the public against radiation hazards. The regulation will apply to all persons who receive, possess, use, or transfer source material, special nuclear material, or by-product material under a general or specific license.

The proposed regulation will be published in the Federal Register, giving official notice of proposed rule making, and a 30-day period will follow during which the public may submit written suggestions and comments.

The proposed regulation establishes maximum permissible limits on exposures to external radiation and concentrations of radioactive material, and maximum permissible levels of radiation in areas access to which is not controlled by the licensee. It also establishes controls over the release of radioactive material from licensed facilities.

The standards incorporated in the proposed regulation are based on recommendations made by the National Committee on Radiation Protection. On the basis of present scientific knowledge and experience the permissible levels of exposure and concentration and other requirements will provide a substantial margin of safety for personnel and the public.

Other provisions of the regulation include requirements regarding personnel monitoring, protective masks and clothing, caution signs and signals, waste disposal, storage of licensed material, instruction of personnel on safe procedures for handling and using licensed material, and records and reports.

Together with the proposed regulations on facilities licenses, special nuclear material, operators' licenses, and the existing source and by-product material regulations which will be revised soon, the regulation on standards for protection against radiation provide a comprehensive system for the control of radiation hazards.

For SAFETY and COMFORT . . .

. . . BASCO-TEX NEOPRENE and PLASTIC COATED SLEEVES and LEGGINGS

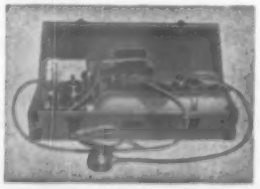
Made in full or elbow length sleeves and as knee or hip length leggings. All have extreme resistance to oils and acids and are designed for comfort and long wear. Complete line protective aprons available.

WRITE FOR OUR NEW CATALOG
SHOWING ALL OUR SAFETY FIRST PRODUCTS

ASSOCIATED
BAG & APRON COMPANY
2650 W. Belden Ave., Chicago 47, Illinois

NOTHING
is More Important than Human Life.

Nothing
is more effective in respiratory emergencies than the



STEPHENSON "MINUTEMAN" RESUSCITATOR

Three machines in one

RESUSCITATOR • INHALATOR ASPIRATOR

Weighs only 30 pounds. Easy to operate, does more for the patient.

Write today for demonstration without obligation or write for pamphlet N-107.

STEPHENSON CORPORATION
RED BANK NEW JERSEY

Makers of the Harger Drunkometer used all over in the industry and police departments, including New York.

Calendar Contest Winners For June

Tim Dodds escaped worry and care
By building dream castles in air.
But now he's in trouble—
A fall burst his bubble

First prize in the National Safety Council's Safety Calendar Contest goes this month to Ruth Good, Electrolux Corp., Old Greenwich, Conn. The theme in this contest was daydreaming causes trouble. Miss Good's line was adjudged the best of all those submitted. It was:

He was "gone" when he should have been there.

Second prize went to Lt. Col. Edmund J. Evans, director of civilian personnel, APO 125, New York, N. Y., for this line:

Future plans, close to earth, he'll prepare.

Third prize was awarded to Harold Smith, Pittsburgh Plate Glass Co., Hicksville, N. Y., for the following line:

Dreams plus vision make fine working pair.

Thirty $5 awards were issued to:

Miss Minnie Maze, Crucible Steel Corporation of America, Midland, Pa.

Richard G. Smith, Sherwin-Williams Co., Chicago, Ill.

Mrs. William W. Chambers, Ardmore, Pa. (Individual Member).

Mrs. Mary D. McCullough, Timber Products Co., Medford, Ore.

John H. Olson, Everett Police Dept., Everett, Wash.

Mrs. Lois R. Kodalen, Dodson, Mont. (Individual Member).

Mrs. Robert G. Swift, Phelps Dodge Corp., Morenci, Ariz.

Mrs. Barbara B. Constant, Hughes Aircraft Co., Culver City, Calif.

Mrs. A. J. Lanfri, Borden's American Dairy, San Jose, Calif.

Mrs. Hildreth H. Hatheway, Dept. of Agriculture, Sacramento, Calif.

M. Dale Williams, Citizens Gas & Coke Utility, Indianapolis, Ind.

Mrs. Amil L. Sutter, International Harvester Co., Milwaukee, Wis.

Mrs. Geneva U. Van Brunt, Westinghouse Electric Corp., East Springfield, Mass.

Katherine Wyckoff, United Aircraft Corp., Windsor Locks, Conn.

Lloyd Ira Miller, Pennsylvania Power & Light Co., Allentown, Pa.

Mrs. Clara Louise Gorsline, Chicago, Ill. (Individual Member).

Mrs. Aurelia Grove, C. & E. I. Railroad, Danville, Ill.

Mrs. Roy M. Perkins, Northwestern Public Service Co., Webster, S. D.

Edward J. Dean, Great Lakes Carbon Corp., St. Louis, Mo.

Mrs. Daisy Haines, Westford Milling Co., Westford, Pa.

Helen Thilenius, Stix, Baer & Fuller, St. Louis, Mo.

Mrs. Nellie Gruelle, Rossford Ordnance Depot, Toledo, Ohio.

Richard N. Taiclet, Republic Steel Corp., Warren, Ohio.

A. J. Herrez, General Motors, Inc., Moraine City, Ohio.

H. R. Sibley, E. I. du Pont de Nemours & Co., Inc., Orange, Texas.

F. A. Landers, National Lead Company, Houston, Texas.

Mrs. Ann Lacy, Mississippi Chemical Corp., Yazoo City, Miss.

Mrs. Victor Sturn, Bergstrom Paper Co., Neenah, Wis.

Mrs. Ray Diekman, Swift & Co., East St. Louis, Ill.

Bryan Woods, Crown Zellerbach Canada, Ltd., Vancouver, B. C., Canada.

N. Y. Controls Use of Flammable Fabrics

ADOPTION of rules and regulations for enforcement of the new State Flammable Fabrics Act, which became effective July 1, have been announced by Isador Lubin, Industrial Commissioner of the New York State Labor Department.

The new state law closes the loophole which has allowed unregulated manufacture and sale entirely within New York of dangerously flammable garments and garment materials. Now they must meet substantially the same requirements as the Federal Law prescribes for interstate commerce and the regulations promulgated by Commissioner Lubin parallel those of the Federal Trade Commission.

"The State Department of Labor," said Commissioner Lubin, "in formulating these regulations, profited from the assistance given by a special advisory board representative of the consuming public, the affected industries, organized labor, and government."

Stout woman, trying on fur coat: "I wish it were called something besides broadtail. My husband loves corny jokes."

MOSQUITOES, ticks, chiggers, *all* biting insects have no place to land when your workers use PELLENT. Three types: *Ointment* for regular use . . . *Cream* that won't sweat out, only soap and water will remove . . . *Spray* for clothing. PELLENT does not stain . . . lasts for hours! Unit 204A Ointment (6½ oz.) . . . $0.60, Unit 205AA Cream (2 oz. plastic) . . . $1.00, No. 320 Pellent Spray (5 oz.) . . . $1.00. Order from your MSco distributor today.

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MEDICAL SUPPLY COMPANY
Rockford, Ill., in Canada, it's Safety Supply Co.

EMALFON®
—SINGER'S *Patented
INSULATED GLOVE

A new kind of glove—so different it's patented—ideal on hot jobs that do not exceed 700 degrees. Made with three thicknesses of material: Outer layer of terry cloth, treated to make it flame-resistant; inner layer of all-wool for added insulation; third layer (next to skin) of soft, fleeced cotton. This combination gives flexibility and long wear.

In many cases it has replaced asbestos gloves at a big saving. Fine for extra warm welding jobs.

If not available from your safety equipment dealer, write us for complete information and prices.

NEW CATALOG—just off the press!
*Patent No. 2,650,365

SINGER
GLOVE MFG. CO.
860 W. WEED ST. CHICAGO 22
"Work Gloves That Sing"

Setol Cleanser HAS WHAT IT TAKES
TO MACHINE-SCRUB OILY FLOORS—

Faster cleaning action!

Cuts operating time of the scrubbing machine

Finnell 213P Scrubber-Vac

Because *Setol* is specially compounded for the greater speed of *combination-machine-scrubbing*, it must *and does* work faster than average alkaline cleansers. *Setol* saponifies *and emulsifies* grimy oil and grease *instantaneously*. The wetting agent in *Setol floats the oil* for fast, easy, *and thorough* removal by the vac of a *combination machine* or with a separate vac unit. And because *Setol* stays fast-acting longer—does not spend its strength quickly as do ordinary oil and grease solvents—less is required to clean a given area. Thus *Setol* saves on materials and, by speeding the cleaning process, cuts operating time of the scrubbing machine . . . reduces labor costs . . . and saves on brushes. Best of all, *Setol gets floors oil-free clean!* Also acts as a disinfectant (contains pine oil), and leaves a pleasant, clean aroma.

- **A constant, fast-acting cleanser for machine-scrubbing cement, wood, wood block, metal, stone, and terrazzo floors**
- **Consistent use on cement floors prevents cement dusting . . . provides a finish that helps seal out waste materials**

Applies cleanser, scrubs, and picks up — in ONE operation!

For demonstration, consultation, or literature, phone or write nearest *Finnell Branch* or Finnell System, Inc., 2208 East Street, Elkhart, Indiana. Branch Offices in all principal cities of the United States and Canada.

FINNELL SYSTEM, INC.
Originators of Power Scrubbing and Polishing Machines

Everything FINNELL for Floor Care

BRANCHES IN ALL PRINCIPAL CITIES

NEW SAFETY EQUIPMENT

Further information on these new products may be obtained by writing direct to the manufacturer or by circling the corresponding item number on the Reader Service Postcard.

Antiseptic Liquid Soap

A liquid soap, which kills germs as it washes the hands, and containing Actamer, a newly developed bacteriostat, has been announced. This soap, called "Degerm," is said to be low in cost and will destroy up to 97 per cent of all bacteria on the skin. The Actamer forms a protective film that keeps bacteria at a low level as long as regular use is continued, and the soap has been found helpful in reducing certain contagious infections. It also is effective in removing causes of dermatitis. "Degerm" is a concentrated

liquid soap which should be diluted before use with two or three parts of water.

The soap is said to be especially effective in kitchens, cafeterias, and food plants. The product is available in 55, 30, 5, and 1 gallon containers.

Huntington Laboratories, Inc., Huntington, Ind. (Item 1)

Fire Extinguisher Cart

A fast, mobile unit that makes fire fighting quicker and easier has been developed. The device is a fire extinguisher cart, sturdily constructed of a one-piece handle, frame, and heavy sheet metal base. The cart is for stationing various combinations of dry chemical, carbon dioxide, and vaporizing liquid type extinguishers at strategic locations and for transporting them quickly to the scene of the fire. It is especially useful when it is necessary for one man, such as a night watchman or a lone employee to fight a fire. It is also handy for holding fire extinguishers for stand-by protection during welding or other operations that create fire risks.

The height of the extinguisher hanger is adjustable so that the cart may be made to hold a variety of types and sizes of extinguishers.

American-LaFrance-Foamite Corp., 100 E. LaFrance St., Elmira, N. Y. (Item 2)

Safety Message Paper Cups

A series of 36 different safety messages, printed in a series, and assorted within a tube, has been developed for use on paper drinking

cups. The cups are attractive, and the slogans have been developed to give them a strong impact.

Dixie Cup Co., Easton, Pa. (Item 3)

Executive Safety Spectacles

A new series of safety glasses, designed to serve more than one purpose, has been developed. The glasses have interchangeable lenses, which are snapped into place without tools. Clear lenses are provided for protection from impact; light green lenses for average sunlight and glare; and medium green lenses are available for bright sun and extreme glare. According to the manufacturer, the lenses are optically perfect and made from shatterproof Methacrylate. The lenses are curved and oversize for extra protection, and the frame itself is curved to form-fit the forehead. The glasses

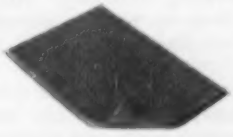
are adjustable, so one size comfortably fits any individual. The nose piece rests lightly on the bridge of the nose and will not pinch or cause pressure.

Each pair of spectacles has its own leatherette case large enough to hold extra sets of lenses in their individual pouches.

Watchemoket Optical Co., Inc., 232 W. Exchange St., Providence 3, R. I. (Item 4)

Industrial-Commercial Mat

A new development in standing comfort has been announced by the manufacturer of the "Airug." Ac-



cording to the manufacturer, the mat is available in two sizes and offers the advantages of sponge rubber without the disadvantages. Although

soft, the mat is durable, and is manufactured from microcellular, or closed cell, sponge so that it will not absorb moisture. The mat is low in cost, compared to old type mats, and is recommended for standing jobs in hotels, stores, plants, and many varied industries. The mat is also available in neoprene type sponge for any application where grease or oil is a problem as in factories, machine shops, etc.

Bearfoot Airway Corporation, Wadsworth, Ohio. (Item 5)

Pressure Controls

New pressure controls, known as Model 80 B, are designed for many important industrial uses. The manufacturer says they provide high and low limit control for steam, air and non-corrosive liquids and gases. They may be used wherever it is desired to start or stop operations at a pre-set maximum or minimum pressure within the range of 3" vacuum to 240 psig.

On heating installations the new controls may be used for high limit safety or to maintain steam pressure within set limits. When used with industrial oil, gas, or combination gas/oil burners, the controls supply all required excess and minimum pressure safety interlocks. High-limit controls open contact on pressure rise, shutting down operation when pilot or main gas line pressure reaches a pre-set safe maximum value. Low-limit controls, installed on steam or air atomizing lines, or gas or oil fuel lines, open contact on falling pressure, stopping operation when it reaches an operating minimum. Auxiliary relays may be used to reverse the action of any control listed in this series.

Calibrated dials indicate operating and differential pressure settings. Controls mount in any position, and the standard connection is ¼" N.P.T.

Electronics Corp. of America, 720 Beacon St., Boston 15, Mass. (Item 6)

Ladder Leveling Device

A device called the "Ladr-Levl" has been developed for use with ladders. Made from high-strength aluminum tubing, the manufacturer says the device is tested to withstand a minimum of 1,000 pounds load on the fully extended leg. The "Ladr-Levl" locks automatically as the user steps on the bottom rung of the ladder. As an added safety precaution, it must be locked manually. The telescoping legs are dependent upon each other and are controlled by the spacer coil spring,

compensating to fit the contour of the ground. Rubber concentric ring feet cling to wet or dry surfaces without slipping or skidding. Ice grips that can be installed quickly to replace the rubber feet are available. The "Ladr-Levl" overcomes lateral stresses and the weight on the ladder is applied directly down the side rails. The device can be installed on either a straight or tapered ladder.

H-B Industries, Inc., 1401 Middle Harbor Road, Oakland 20, Cal. (Item 7)

Ammonia Mask

An ammonia mask equipped with an "all-vision" face piece, is available. It covers the entire face and offers protection to eyes and lungs. The lenses are protected against fogging by deflectors built in the face piece which conduct incoming air over their surface. The face piece is connected by a flexible breathing tube to a canister containing chemicals for ammonia-absorption. The manufacturer says that the mask permits working freedom and is comfortable. Lenses are shatterproof, and head straps are replaceable and designed for quick adjustment in an emergency. It is designed for use wherever ammonia is used or manufactured, such as in ice refrigeration plants, packing plants, and chemical plants.

Mine Safety Appliances Co., 201 N. Braddock Ave., Pittsburgh 8, Pa. (Item 8)

Squeeze-Tube Antiseptic

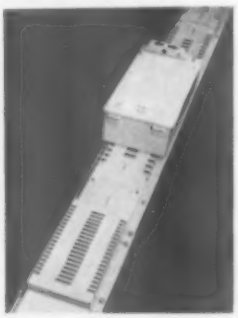
Clear polyethylene tubes with a "squeeze-to-use" action for dispensing antiseptics have been developed. The tubes are designed to replace old fashioned antiseptic swabs. Con-

taining merthiolate, the tubes are available in 4 cc and 2 cc sizes. The Unidrop tubes make application of antiseptics easy and do away with the possibility of adding irritation to an injury. By gently squeezing the end of the Unidrop tube, the antiseptic can be directed into or around the edges of the wound, one drop at a time. The Unidrop is economical, using only a few drops to cover a large area.

E. D. Bullard Co., 275 Eighth St., San Francisco 3. (Item 9)

New Busway System

A new development in busway systems, called Uni-Bus busway, has been announced. It is a low voltage drop, plug-in and feeder system. The system uses an interlocked safety slide over plug outlets which cannot be opened until covered by a plug. Two interlock buttons are depressed by heavy studs on the back of the plug box which releases the safety slide interlock. Opening the



safety slide interlocks the plug to the housing so that it cannot be removed before the slide is again closed. The safety plug after being attached to the plug-in busway cannot be connected to the bus bars until after the cover has been closed and the safety-slide opened. At this time only is it possible to close the circuit. Due to the interlocking mechanism the "Uni-Bus" safety

plug cover cannot be opened until the switch is completely disconnected. With the cover of the plug open, all contacts are visible as further assurance that there are no live parts within the plug body. A new feature helps develop high short-circuit strength in carrying heavy current loads. A new clip-on hanger allows easy installation. There is one housing size for all ratings, 225, 400, 600, 675, and 775 amperes, with copper or aluminum bus bars.

Roller-Smith Corp., Electrical Switchgear, Bethlehem, Pa. (Item 10)

Waterless Hand Cleaner

This waterless cleaner contains lanolin, fortified with cholesterol, and is claimed to contain no harsh

alkalis or abrasives. According to the manufacturer, it will quickly and easily remove paint, printers' ink, grease, vegetable stains, glue, carbon, and tar. It is available in various size containers. A dispenser is available for use with the 5-pound can.

Quickee Industrial Sales, Yonkers, N. Y. (Item 11)

Face Mask

A new face mask with an aluminum frame that is durable, light and resistant to corrosion has been announced. A heavy-gauge plastic window contained on all four edges offers practical protection from sprays of acid, flying particles of metal, glass, and other foreign matter.

The headgear is comfortable and form-fitting and is adjustable to all head sizes. The mask is available in a variety of styles, with side shields and with hoods of neoprene and vinylite.

Industrial Products Co., 2820 N. Fourth St., Philadelphia 33. (Item 12)

Crane Hook

A Swedish positive-locking safety crane hook, drop forged of chrome nickel steel, has been announced. It is designed so that the body of the hook completely encloses the

sling at all times. The pressure of the sling forces the open side of the body to close completely, with a spring loaded safety catch making a positive lock. The large safety catch can be easily released by an operator wearing heavy gloves. According to the manufacturer, the hook cannot open in use, even under swinging loads, and both the 3-ton and 10-ton models are guaranteed with a safety factor of 4.

The Walpole Co., 419 Boylston St., Boston 16. (Item 13)

Colorblind Test

A simple, inexpensive test now makes it possible to determine if a person has color vision deficiency, what type, and how serious it is in a matter of moments.

According to the manufacturer, this is the first time such a color blindness diagnosis can be made without costly instruments and a long, highly-technical procedure. The test is easily administered and is useful in industry, business, and education. It is also of value in job rating, vocational guidance, and occupational safety.

American Optical Co., Southbridge, Mass. (Item 14)

Tie Wire

A wire for tying reinforcing bars and other tying jobs has been announced. The tie wire is packaged with the thought of safety, economy, and efficiency, and is available with reel dispensers for both right and left handed workers. The dispensers are attached with belt fittings and leave workers' hands free for tying, carrying, or holding without interference from the wire coil. Because shoulder coils are eliminated, speeded-up tying of inside forms and freedom from kinked or tangled wire is possible. Both annealed and galvanized wire is available in gauges 14 through 20. Each coil of the tie wire weighs a minimum of 3½ pounds and the light-weight reel dispenser weighs approximately 3 pounds.

Wickwire Spender Steel Div., The Colorado Fuel & Iron Corp., 575 Madison Ave., New York. (Item 15)

Explosion-Proof Vacuum Cleaner

A wet and dry pick-up vacuum cleaner for use in most industries where electric sparks are a fire hazard has been announced. The vacuum cleaner has a totally enclosed and specially designed motor which

allows it to be used where an explosion-proof vacuum cleaner is necessary.

Hild Floor Machines Co., 740 W. Washington Blvd., Chicago (Item 16)

Industrial Lift Truck

A lift truck, called the Monomast, featuring a single mast has been developed. According to the manufacturer, the Monomast allows panoramic visibility. It consists of two

box-type sections, one telescoping within the other. The unit allows the operator a clear, unobstructed view to both forks and load and permits faster operating speed, maneuverability, approach, and accurate load placing and safer load handling. The design is said to be very strong, and it is claimed that torsional rigidity in the mast has been increased 80 per cent and mast deflection reduced 50 per cent. The load raising

speed is 58 feet per minute, and the slight horizontal carriage location permits the lift truck to angle back out of tight positions after load depositing. The Monomast mounting is conventional and can be field-installed on current models of the manufacturers' UC-30 and YC-40 model trucks.

Hyster Co., P. O. Box 4318, Portland 8, Ore. (Item 17)

Linemen's Safety Belt

A safe and comfortable linemen's belt called the "Bak-Saver" has been developed. The manufacturer says the belt eliminates the hazard of falling out of the saddle and allows the lineman to work further out from the pole with greater comfort and freedom. The belt combines the protection of a safety belt with the comfort of a back support. The support portion of the belt is made from high quality russet strap leather and is ventilated for cool comfort. The tool saddle and dee saddle are made from high strength russet steer harness leather. The belt is worn in a low, comfortable position, firmly supports tool weight, and holds the tool belt in a proper position at all times.

Miller Equipment Co., Inc., 13th & Eagle Sts., Franklin, Pa. (Item 18)

Electric Eye Machine Guard

An electric eye machine guard has been announced. A wide screen of light passes between the worker and

the danger zone of his machine. If the worker obstructs any part of the light, the machine is stopped the same as if a stop button had been pushed. The guard can be used on power presses with friction clutches or hydraulic drive on shoes and brakes, and on high-voltage equipment. The screen of light is available up to 1 foot high. Projector and receiver can be up to 20 feet apart. The electric eye is designed so that any failure inside the device will shut off the machine. An excess of light shining into the receiver will also stop the machine.

Electronic Control Corp., 1573 E. Forest Ave., Detroit 7, Mich. (Item 19)

Electric Cable Hoist

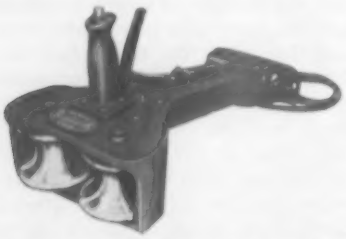
A lifting speed of 25 fpm is available in the DR Model 55 electric cable hoist. The compact unit is fully enclosed and permits exceptionally close headroom for electric hoist construction, according to the manufacturer. Gears are permanently lubricated by Type G "Molykote" molybdenum compound. Ballbearings have sealed-in lubrication. The hoist is push-button controlled with 110 volts at the box. Load protection is provided by a solenoid-operated motor brake and a heavy-duty Weston type friction brake.

Capacities include ¼ and ½ ton which operate on 110/220 volt, single phase, 60 cycle or 220/440-volt, 3-phase, 60-cycle current, and a 1-ton model which uses 220/440-volt, 3-phase, 60-cycle current.

David Round & Son, Inc., Box 883, Cleveland 22, Ohio. (Item 20)

Hose Guide

A hose guide and level-rewind attachment for use on tank trucks carrying petroleum products has been announced. The "Guidemaster," as the device is called, enables deliverymen to unwind hose easily to the left or right side of trucks, thus eliminating some parking problems and preventing scuffing of hose

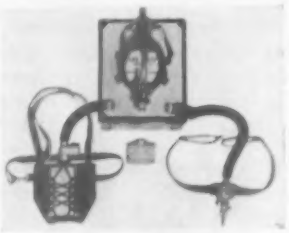


on panel sides. For guided unwinding, the operator sets the guide arm for left, right, or straight position and unreels the hose, while free-spinning ballbearing rollers prevent sharp bending. In rewinding, the operator squeezes the positioning lever, presses the control button, and swings the guide arm back and forth as the hose rewinds smoothly and evenly. The device can be installed on already operating reels, or can be obtained attached to the reel.

Clifford B. Hannay & Son, Inc., 554 Main St., Westerlo, N. Y. (Item 21)

Gas Mask Kit

A gas mask kit designed to meet plant hazards for millwrights and maintenance men has been an-

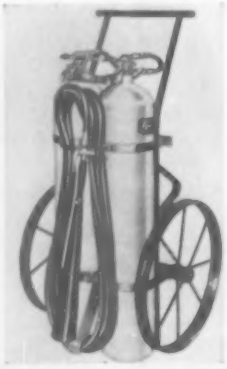


nounced. The mask provides, according to the manufacturer, (1) a full-vision face piece for dust and smoke protection, (2) a canister mask to protect against all gas hazards and visible smokes from fires, and (3) an air-supplied mask (plant compressed air) for use in a harmful or objectionable atmosphere. It is claimed that the maintenance man is able to meet any hazardous atmospheric condition in the plant with this equipment.

Acme Protection Equipment Co., 1209 Kalamazoo St., South Haven, Mich. (Item 22)

Wheeled Extinguisher

A wheeled engine fire extinguisher designed to put out blazes in oil, gas, and other volatile liquids, and live eiectrical fires has been an-



nounced. Cylinders on each of the engines are capped by lever-operated valves which permit the immediate discharge of the liquid caps CO_2 so that the engines can be put into action quickly. The engines are made in 50, 75, and 100 lb. capacity models and, are approved by Underwriters' Laboratories. The twin

50-lb. cylinders on the 100-lb model can be operated independently or in tandem. The manifold assembly on the 100 lb. model consists of high-pressure rubber hose fittings which are able to withstand rough use. The design of all three models allows easy servicing and recharging. One man can disassemble the metal straps to remove a cylinder for refilling. Frames are of solid welded construction.

Fyr-Fyter Co., 221 Crane St., Dayton 1, Ohio. (Item 23)

Warning Signal Flasher

The Warn-O-Flash, a flashing warning signal, has been announced. The intermittent red flash can be seen for a distance of 2,000 feet and penetrates haze and fog. The device can be used to give warning of some danger area, such as temporary construction, or a damaged step. The incandescent model, developed for

commercial use, is a plug-in type which is put into the electric socket to operate the flasher. The bulb of this flasher was designed so that it will not go out of order when jarred or dropped. It is contained in the dome of the 6" high device.

The unit is sturdily constructed of resilient, non-inflammable vyrene, and is non-breakable, even if dropped or thrown against a hard surface. It is guaranteed not to crack, break, or burn. The flasher unit is Underwriters' Laboratories approved and is equipped with an 8 foot cord. The Warn-O-Flash is also available in models for automobile usage with a plug for insertion into the cigarette lighter.

The Safety Warning Signal Co., 1800 Coney Island Ave., Brooklyn N. Y. (Item 24)

Combination Aluminum Ladder

A new aluminum extension ladder is being introduced to industry. It can be quickly converted to an "A" type ladder by pulling the bottom fly section from the butt ladder. This combination "A" and extension ladder is versatile for use on such jobs as industrial painting, cleaning, and heavy maintenance. It is available in extended lengths from 21 to 29 feet. The weight of the ladder ranges from 52 pounds to 67 pounds.

An automatic locking device prevents closing when used as an "A" ladder. Adjustable, rubber-tipped

outriggers not only stabilize the "A" ladder, but are useful when using the extension ladder on uneven ground. The outriggers retract into the side rails for storage.

The ladder is made of industrial, high tensile strength aluminum alloy. The rungs of 1" tubular, corrugated aluminum are permanently secured to the side rails and, according to the manufacturers, meet the standards set up by the ASA and Metal Ladders Association.

Aluminum Ladder Co., Worthington, Pa. (Item 25)

Explosive Gas Indicator

An explosive gas indicator little larger than a fountain pen has been developed. Compact and simple to operate, the indicator is particularly useful for utility companies, petroleum companies, and other industrial organizations dealing with explosive gases and vapors. It is intended for use where a quick "go, no-go" spot check for combustible gases or vapors is needed —in man holes, tanks, tank cars, etc.

The unit is self-contained and operates on two small penlight batteries. In use, the light bulb, when depressed, acts as the switch. When the switch is on the bulb glows dimly. If there is a trace of combustible gas or vapor in the atmosphere, the light begins to flash intermittently. As the concentration of combustibles increases, the flashing becomes more rapid, until a steady bright light indicates the atmosphere is hazardous. The indicator can be tested in the absence of combustible gases.

Davis Emergency Equipment Co., 47 Halleck St., Newark, N. J. and Hogart Engineering Co., 1050 S. Olive St., Los Angeles. (Item 26)

Vacuum Floor Machine

A 21-in. floor machine that rapidly propels itself and has its own built-in vacuum system has been developed. The machine is said to allow three to four times faster operation than is common with machines of this size. It is designed for buffing, rewaxing, polishing, or scrubbing hardwood, asphalt tile, vinyl, and similar types of floors.

The machine is self-propelling, weighs less than 90 pounds, and is only 24" wide. A 3,450 rpm vacuum fan sucks dust and light soilage into a large fabric bag. The machine covers a 21 in. wide path. The low hood design allows it to operate flush with walls and machinery and permits cleaning well under desks and benches. Flexible rubber skirts help "seal" the vacuum housing to the floor, allowing a powerful vacuum action along the entire buffing or polishing cylinder. Accessories are available.

G. H. Tennant Co., 2566 N. 2nd St., Minneapolis 11, Minn. (Item 27)

Glove Patch Test Kit

A patch test kit containing one-centimeter-diameter discs of Stanflex and Stanzoil is now offered to

make it easier for dermatologists to test the materials and lining used in the manufacturers' gloves on their

patients. The patches are packaged in plastic vials and are known as Patch Test Kit No. 8.

The Pioneer Rubber Co., 1939 Tiffin Rd., Willard, Ohio. (Item 28)

Truck Lift Gate

A hydraulic elevating tail gate, called Model 144 Lift Gate, has been

developed for use on ¾- and 1-ton stake and van trucks, and many larger trucks. The gate has a 1,000-pound lifting capacity. The lighter weight, lighter capacity tail gate has a manual-spring closed platform and is available in either ramp or square-end general purpose styles.

Anthony Co., Streator Ill. (Item 29)

Safety Slogan Shop Towels

Shop towels imprinted with safety slogans have been introduced. Workmen are constantly reminded of their responsibility in practicing safety every time they use their shop towel. Called Texel Towels, they have smoothly bound edges that cannot fray to catch in machinery and are of even weave and

uniform size with high absorbency. The towels are rented through industrial launderers.

Industrial Wiping Cloth Co., Inc., 29 - 41st Ave., Long Island City 1, N. Y. (Item 30)

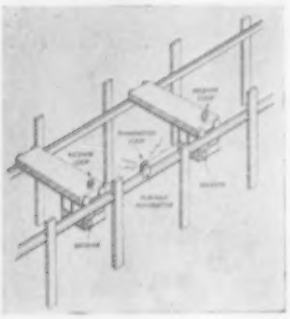
Pocket-Size Ammonia Detector

A new, pocket-size device for detecting ammonia leaks is now available. The device is a booklet containing paper strips impregnated with phenolphthalein. By tearing a strip from the book, saturating it with water, and holding it near suspected leaks, the user can detect the presence of ammonia when the color of the paper turns red.

Nitrogen Division, Allied Chemical & Dye Corp., 40 Rector St., New York 6. (Item 31)

Crane Runway Control

A new control system for crane runways has been introduced. Developed primarily as a safety device, the new system permits workers to attend to a disabled crane without danger from other cranes approaching on the same runway. The system automatically gives warning of the approach or shuts off the movement of an oncoming crane.



Distance at which the warning or shut-off action is effective is adjustable from 1 to 20 feet. The equipment for the control system operates on an electrical impulse system, and consists of a receiver and a portable transmitter, with a transmitter loop to be positioned wherever temporary protection is required. The equipment is of a "fail-safe" design so that any failure will cause a warning signal. A sensitivity control on each receiver determines the distance at which the receiver relay is held energized by the transmitter loop. This provides a flexible field adjustment for setting the warning to become effective at any desired distance. The equipment is made for heavy duty industrial use.

Femco, Inc., Irwin, Pa. (Item 32)

Antiseptic Hand Soap

An antiseptic hand soap, containing both lanolin and Actamer, has been introduced for industrial and institutional use. The new soap, called Acto-Lan, is available in both powdered and liquid form and is said to combine cleansing properties with gentle germicidal action. According to the manufacturer, regular use of the product will reduce skin bacteria by as much as 97 per cent and will reduce the time lost due to disease transmission and infection of small cuts and abrasions. The product is available in drums, cartons, or shaker-top cans.

Monsanto Chemical Co., St. Louis 4, Mo. (Item 33)

Portable Gas Detector

A light, simple, compact instrument for detecting combustible gases and vapors is now available. The instrument is called the J-W Sniffer, Model G. This portable indicator has, according to the manufacturer, several new improvements including an on-off switch that has been integrated with the aspirator bulb so that grasping the bulb to draw in a sample of the atmosphere automatically turns the indicator on. When the bulb is released the instrument is shut off. Another improvement is a new type flame-arresting system that permits the use of a soft aspirator bulb because of reduced resistance to air flow.

The model is designed to be worn waist-high, suspended by a carrying strap. Model G is constructed

with a corrosion-resistant fibre glass case; has a circuit which maintains maximum filament sensitivity; has a hermetically-sealed indicating meter which is unaffected by moisture, dust, or magnetic field, and has an easily replaceable combination flame-arrester and filament assembly. The unit uses ordinary flashlight batteries. The weight, complete with batteries, is slightly over 4 pounds.

Johnson-Williams, Inc., 2618 Park Blvd., Palo Alto, Cal. (Item 34)

Platform Lift Truck

Designed for handling of overhead maintenance jobs, the Model 27 "Lift-A-Loft" has a platform height of 27'. The unit is operated

by push buttons and, according to the manufacturer, will safely carry loads up to 500 pounds. The platform reaches 16' in front of the truck. One man can operate the unit, riding the platform to the job

location, then rising up and out to the objective in less than 30 seconds. Overall height of the unit in traveling position is 10 ft. and the overall width is 49 in. The unit is especially practical for work on overhead lights, piping, girders, or other overhead maintenance problems.

Lift-A-Loft Co., Box 1225, Muncie, Ind. (Item 35)

News Items

Edmond C. Corbett has been appointed district manager for direct sales of Sol-Speedi-Dri in Illinois, Indiana, and Wisconsin. Mr. Corbett has been a sales representative for five years for the Speedi-Dri Corp. A graduate of Providence College, in Rhode Island, Mr. Corbett was engaged in sales work in the industrial safety and maintenance field for seven years prior to joining the Speedi-Dry Corp.

Also announced was the appointment of Douglas M. Lyon as district manager for direct sales of Sol-Speedi-Dri in Ohio, Western Pennsylvania, and New York. Prior to joining Speedi-Dri Corp., Mr. Lyon was with Economics Statistics, Inc.; was a manufacturer's representative for five years; served as sales manager for Porter-Cable Machine Co.; and did sales work for Safety and Maintenance Co., Inc. He joined Speedi-Dri in 1950 and became a regional sales manager in 1952.

* * *

M. J. Ross has been named manager, export trade, for both the Quaker Rubber Corp. and the Watson-Stillman Co. Divisions of H. K. Porter Company, Inc. Previously, Mr. Ross was export manager for Quaker Rubber Corp., handling all foreign sales of their industrial rubber products. He will now handle the hydraulic presses and equipment of the Watson-Stillman Co. which supplies equipment primarily to the railroads and plastics and metal-working industries. A graduate of the University of Boston School of Business Administration and of the University's Law School, Mr. Ross was manager of the Industrial Rubber Products Division of Firestone International Co. before joining Quaker Rubber.

William J. Carroll, president and general manager of the Rockwood Sprinkler Co., has announced the appointment of Donald A. Knapp as manager of the company's New York office. Mr. Knapp served as policy examiner and assistant chief

engineer in the sprinklered risk department as a member of the Board of Fire Underwriters of the Pacific Coast. He was employed in the insurance department of Bethlehem Steel Corporation before joining the Rockwood Sprinkler Co. Mr. Knapp attended the University of California and Stanford University.

Rockwood Sprinkler also has announced the retirement of N. D. Sherwood. Mr. Sherwood has been associated with the Automatic Sprinkler Industry for 47 years. The last 20 years he has been with Rockwood

Sprinkler as special hazards consultant and manager of the rate-of-rise department.

* * *

Robert F. Bourne has been appointed director of sales-national accounts for the Colorado Fuel and Iron Corp. Mr. Bourne will maintain headquarters in Wilmington, Delaware. He has been with Colorado Fuel and Iron since 1946 and has been a sales engineer, manager of export sales, and manager of rolled products sales.

The company also announces the appointment of Edwin F. Lord to succeed Mr. Bourne as general manager of sales for the Claymont steel products department. Mr. Lord has been associated with Claymont since 1950. Prior to his new appointment, he served as sales manager of the fabrication department for Claymont. Before joining this organization, he was employed by the Westinghouse Electric Corp. as a sales engineer.

* * *

W. E. Noyes, vice-president in charge of sales for Diversey Corp., has announced the promotion of three men to new posts created in the sales program. J. A. McMurtry, formerly assistant general sales manager, has been named division manager to head the east central division. C. R. Reid has been promoted to sales manager, food industries, and H. M. Pickles has been announced as assistant to the sales manager, food industries. The Diversey Corp. manufacturers processing chemicals for the metal-working field.

* * *

Warren Ingersoll has been appointed assistant to the president of the Electric Storage Battery Co. Mr.

Ingersoll will work in the field of customer relations. He was formerly assistant to the president of Lee Rubber and Tire Corp. and at one time was with the investment firm of Smith, Barney and Co.

* * *

Charles L. Foote, president of the H. M. Sawyer & Son Co., heads a group which has just purchased control of the company from the estate of the late Howard M. Sawyer. The company is a producer of safety and protective clothing, and other re-

lated products, and has plants at Cambridge and Watertown, Mass. Mr. Foote will continue as president and director, with Robert M. Craig as treasurer and S. Lang Makrauer as secretary of the company. A. K. Morley Horton will continue as sales manager of the protective and safety clothing division.

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Prevents death and injuries from falling.

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Health Conference Set For September 12-13

DATE FOR the second annual Pacific Northwest Industrial Health Conference has been set for September 12 and 13 in Portland. All sessions will be held at the Multnomah Hotel.

Sponsored by the Portland Chamber of Commerce, the first conference, held last year, was attended by some 315 registrants. It is expected that between 400 and 500 persons will register for this year's meeting. A number of nationally recognized industrial health authorities will be featured during the two-day program. Features of the 1955 meeting will include an industrial health program for the small plant and a report on how the cardiac can work.

Information, program outline and registration blanks can be obtained by writing to: Pacific Northwest Industrial Health Conference, 824 S.W. Fifth Avenue, Portland 4, Ore.

Noise Abatement

A silent candy wrapping to cut out the distracting rustle at concerts and theaters has been developed by a British firm.

The President's Medal

Awards made by the National Safety Council for successful application of artificial respiration

---

RUSSELL ALBRIGHT, lineman, Grundy County R.E.C., Grundy Center, Iowa — electric shock. Certificate of assistance to HARRY ASCHER.

R. S. BROWNE, safety inspector, Texas Eastman Co., Marshall, Texas—drowning. Certificates of assistance to FRANK E. OGDEN, JAMES D. CAIN and R. S. SILVERS.

FRANK L. GUNNIP, anode foreman, Reynolds Metals Co., Longview, Wash.—electric shock.

AL MORZENTI, mechanic, Boeing Airplane Co., Seattle, Wash.—gas asphyxiation.

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TRADE PUBLICATIONS

These trade publications will keep you up-to-the-minute on new developments in safety equipment and health products. All catalogs are free, and will be sent without obligation. Just circle publication number on the Reader Service Postcard.

1. Steel Rolling Doors: Catalog contains the most up-to-date details on the interlocking steel-slat rolling doors. Included are: service doors, fire doors, bifold doors, rol-top sectional overhead doors, steel rolling grills, and special rugged motors for time-saving push-button door operation. Kinnear Manufacturing Co.

2. Hose Reels for Fire-Fighting Equipment: A new 16-page illustrated catalog describes company's complete line of hose reels for fire fighting equipment. Featured is the new space-saving, elevated motor reel which gives equipment designers greater flexibility in positioning fire hose reels. Specifications, as well as a description of the operational advantages of the entire line, are also included. Clifford B. Hannay & Son, Inc.

3. Safety Sole Selector: A sole selector designed to enable you to instantly determine which safety sole is best for every department of your plant is available along with a brochure describing the services of the Industrial Division of the Gro-Cord Rubber Company.

4. Floormobile: Bulletin No. 551 covers in detail the features and advantages of Floormobile for suction cleaning (instead of sweeping) dust, dirt, lint, trash, paper, etc. from large floor areas. Floormobile cleans up to 20,000 square feet an hour. Handling Devices Co., Inc.

5. Two New Scaffolding Catalogs: Catalog ST-10 is a 16-page booklet illustrating the firm's wide variety of tubular sectional scaffolding, including such allied equipment as casters and base plates, putlogs, shoring equipment, side brackets, rolling towers, metal catwalks, material hoist towers, etc. Catalog MT-20 is an 8-page sectional showing the maintenance trestle line, including such related equipment as rolling safety ladders, window platforms, lean-to ladders, ladder jacks and other items. Bil-Jax, Inc.

6. Wire Rope and Chain Fittings: Complete 45-page illustrated catalog gives detailed information on safety clips, links, turnbuckles, hooks, sockets, thimbles, eye and ring bolts, shackles and swivels. Specifications given for all products. Thomas Laughlin Co.

7. Cots and Stretchers: Catalog illustrates and describes a complete line of cot and stretcher equipment for vehicles or any first aid room requirements. Complete specifications included. Washington Products Co.

8. Safety Messages: Literature gives details on how safety messages printed on drinking cups can bring varied safety ideas to your workers. The series of safety messages available, and other details included. Continental Can Co.

9. Wire Rope Slings: 120-page manual gives complete up-to-the-minute data on wire rope slings, with hundreds of explanatory illustrations. Colorado Fuel and Iron Co.

10. Hot Food and Liquid Carriers: Brochure shows how these portable hot food and liquid carriers can solve in-plant eating problems. Application of "Aervoid" stainless steel vacuum-insulated food containers to speed mass feeding is described. Vacuum Can Co.

11. Women's Safety Hat: Bulletin features the "Guardi-Ann Hat" designed to enclose more hair than conventional caps and thereby provide full protection for all hair all the time. Free sample included. Chic Maid Hat Manufacturing Co.

12. Safety Spectacles: Well-illustrated 4-page folder on modernly styled safety spectacles incorporating a new safety lens material. The full-color bulletin illustrates the attractively colored spectacles in styles suitable for both men and women, with corrective and protective lenses. United States Safety Service Co.

13. "A Carpet of Safety": This small folder outlines how this UL-approved oil and grease absorbent prevents accidents, fires and simplifies maintenance. It also lists typical industries where the absorbent is particularly useful. Flor-Dry Co.

14. Prevent the Spread of Dermatitis: How to eliminate the cause of dermatitis and other skin diseases through use of D L Handi-Cleaner is discussed in this bulletin. Details on the cleaner are included along with information on the firm's D L dispenser. Banite Co.

15. First Aid Kits: This illustrated 4-page bulletin describing unit-type first aid kits features equipment suitable for aircraft, busses, trucks and other vehicles. Also shown are kits for various types and sizes for industries, for individuals and small groups and for specialized hazards such as snake bites. Pac-Kit Co.

16. "Protecting Life, Property and Profits": An illustrated 36-page booklet for those interested in protection against fire, burglary and other hazards. The multi-colored, pocket-size booklet graphically describes the many ADT Central Station Electric Protection Services supplied to more than 52,000 subscribers in approximately 650 municipalities throughout the United States. American District Telegraph Co.

17. Liquid Level Gauge Illuminators: New, 2-page data unit 263 illustrates and describes the newly improved solid-wedge type illuminators. Important changes, including the way the plastic wedge is mounted to give greatly improved, even diffusion of light over the entire gauge glass, are described. Also described and pictured is the UL-approved explosion-proof lighting unit. Jerguson Gage & Valve Co.

18. "Ready Made Signs for Safety": A 42-page catalog in color illustrates company's complete line of safety signs for industrial and traffic use. Shown are: danger signs, caution signs, think signs, notice, arrow and safety first signs. Also shown are: street signs, advertising signs, traffic and construction signs. Specifications and prices included. Ready Made Sign Co., Inc.

19. "Studies in Centralized Lubrication": This 6-page illustrated bulletin outlines and gives the applications of central lubricating to industrial machines. By using the system, all bearings on the machine are lubricated at once without shutdown. Farval Corp.

20. "A Guide to Safety Promotion": A booklet jam-packed with safety campaign plans and ideas. Contents include: How to Plan Safety Campaigns; How to Run a Safety Contest; Safety Novelties, gimmicks, etc. Organization Services.

21. Protective Portable Lighting Equipment: Catalog No. 49-A illustrates and describes protective portable lighting equipment which eliminates hazards of sparks or shock from broken light bulbs. McGill Manufacturing Co.

22. The Non-traumatic Carrier: 4-page bulletin illustrates and describes the advantages of using a non-traumatic carrier which helps prevent additional injury caused by improper handling of injured persons. Illustrated photographs show how the carrier assembly is used. Sarole, Inc.

23. Ladr-Levl: Bulletin describes a ladder level for straight ladders or for tapered ladders. The Ladr-Levl adjusts itself to any surface regardless of the condition of the ground. It locks automatically as the user steps on the bottom rung of the ladder. The weight moves a lock pin between the coils of the spring and holds the legs in place. The level prevents any slipping of ladders. Shoring of ladders is eliminated and the practice of having one man steady and hold the ladder is no longer necessary. H. B. Industries, Inc.

24. Safety and Traffic Signs: 9-page catalog features company's line of industrial and traffic signs. Also featured are bulletin boards, directories, desk name plates and blackboards. Moore Signs, Inc.

25. Visored Goggles: Illustrated folder shows several models of lightweight one-piece plastic lens goggles (clear or green) that have an opaque shield across the top to prevent glare from overhead lighting. Jones & Company.

26. For Slip-proof Floors: Pamphlet describes how Oil-Spunj prevents slipping accidents on slick oil covered floors. Non-flammable product eliminates accident hazards and improves the appearance of unsightly and dangerous greasy floors. Canfield Oil Co.

27. Vacuum Hand Pump: Applications of vacuum hand pumps to transferring liquids on many different types of jobs is discussed in this brochure. Cross-sectional diagram of pump with important features explained. Tokheim Oil Tank & Pump Co.

28. Sweep-Guards: Detailed diagrammatic drawings of the sweep guard attached to various types of presses featured in this booklet. Series pictures show action of guard. Different ways to attach to presses. Operation facts in text. Weisman Manufacturing Co.

29. Sling Chains: Line of sling chains and accessories in 31-page catalog. Specifications listed, and care and inspection of sling chains included. Also shown are hooks, links, magnet chains and rings. American Chain & Cable Co.

30. Anti-fogging Liquid: An anti-fogging liquid that forms an invisible coating which resists formation of fog or moisture on lens surfaces is described and pictured in this bulletin. The liquid is said to prevent fogged goggles under severe conditions of hot steaming vapors, freezing temperatures, etc. Wilkins Company.

31. All 'Round Deodorizing: Bulletin features a new deodorizer designed for dozens of uses. Called Rounds, this cake-type deodorizer features a new, locked-in aroma that lasts until the aromatic material is completely vaporized. Recommended for urinals, lavatories, storage and locker rooms, closets and garbage storage areas, etc. C. B. Dolge Co.

32. Protective Helmets: 16-page brochure No. 0600-3 illustrates a complete line of Skullguard protective helmets developed for industrial workers, miners and firefighters. A pictorial essay traces each step in the molding of Skullguards, and describes the testing processes employed to assure uniform standards of protection. Along with descriptions of reinforced and high-pressure plastic headgear, full descriptions of hats made of glass fiber and aluminum are given. Mine Safety Appliances Co.

33. Watchclock System: Circular gives full details on how the Watchman's clock works, how a watchclock system watches the watchman and thereby reduces insurance rates for the user. Chicago Watchclock Division.

34. "Daily Maintenance of Public Washrooms": A new 4-page brochure illustrates company's line of sanitation products. Instructions for both daily and weekly washroom maintenance operations included. Huntington Laboratories, Inc.

35. Emergency Lock Release: Bulletin describes and illustrates the emergency lock release designed for immediate access to rooms and areas that are locked, such as storage rooms, hose and hydrant houses, boiler rooms, etc. or wherever entrance may be required in an emergency. American Allsafe Company, Inc.

36. Dust Collectors: How all-around dust control is provided by company's line of dust collectors is described and illustrated in this catalog. Information on sizes and models which have been designed to solve any dust control problems included. Torit Manufacturing Co.

37. Gloves & Aprons: In addition to providing complete information on the full line of liquid-tight all-neoprene, neoprene-coated and vinyl-coated industrial gloves and aprons, this catalog shows how to choose the right protective glove for the job and how to get the most out of your glove dollar. It considers such factors as the type of hazard, amount of protection required, dexterity, abrasion resistance, slippery parts handling, temperature, color, etc. Included is a chart giving performance ratings for various types of gloves in contact with common industrial chemicals. Pioneer Rubber Co.

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WELDED STEEL SAFETY LADDERS
For Filing Rooms—Stock Rooms—Vaults

SAFE • STRONG • EASY TO MOVE • EASY TO CLIMB • NON-SKID STEPS

45"—5 Step

New improved design now being made from 1" diam. round furniture tubing.

Mounted on Swivel Brake Casters which allow the ladder to be rolled freely when no one is on it. When you step on the ladder the rubber cushioned legs rest on the floor and prevent rolling.

Made in 7 heights: — 18" 2 Step, 27" 3 Step, 36" 4 Step, 45" 5 Step, 54" 6 Step, 63" 7 Step, 72" 8 Step.

All are made in 18", 20" or 24" width. Send for Circular No. 53-N and prices on these ladders and our full line of Wood Rolling Ladders.

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BALMASEPTIC
Top-Quality Liquid Soap
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Smooth, gentle BALMASEPTIC contains the G-11 Brand of Hexachlorophene. *Regular use reduces bacterial count on skin as much as 95%.*

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SAFETY FILMS

For further information on publications or films listed here, write Nancy Lou Blitzen, Film Consultant, Membership Service Bureau, National Safety Council.

Grinding Care and Use

Play It Safe (16mm sound motion) color. 24 minutes. Production date, 1954.

This film was produced for the Peninsular Grinding Wheel Division of the Abrasives & Metals Manufacturing Company. It deals with the proper care and use of various grinding wheels. A talking grinding wheel tells his objections to the abuse and unsafe use he is made to take and points out the correct and safe ways to use him. Although there is a little advertising in the film, the production as a whole is quite suitable for general industrial use.

Prints are available for preview and purchase from The Jam Handy Organization, 2821 East Grand Blvd., Detroit 11.

Fires

Before Hydraulic Fires Start (16mm sound motion) black & white. 12 minutes. Production date, 1955.

This film sponsored by Monsanto Chemical Company stresses the importance and versatility of hydraulic power as an industrial tool. It points out that fire-resistant fluids make possible safer and better use of such equipment. It shows how the danger of fire exists in such equipment and a few gallons of convential petroleum oils under pressure can serve as a "fuse" for a large and destructive fire.

Prints are available free from Public Relations Department, Monsanto Chemical Co., 1700 South Second St., St. Louis 4.

Supplement

The August quarterly Supplement to the 1955 issue of the *National Directory of Safety Films* is now available. This Supplement will be sent free on request and also will be included in any copies of the Directory purchased from the National Safety Council. Single copies of the Directory sell for $1.00 each.

Traffic SAFETY MIRROR
• Eliminate traffic accidents at blind corners inside and outside your plant —also at loading platforms.
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• Mirrors are easily installed and adjustable
WRITE FOR FOLDER and PRICES
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Quickly and Easily Installed by Anyone — No Tools Needed!

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VEKI's larger, roomier elastic-type snood is designed specifically for enclosing more hair than any conventional type cap . . . full protection for all hair all the time! Front of twill. Back is made of mesh—can also be had in solid or flame-proof materials. Navy blue, and brown. Adjusts to all head sizes. Descriptive literature on request.

Manufacturers and distributors of a complete line of safety clothing and equipment.

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Assures ABSOLUTE SAFETY plus Freedom of Movement for men on HIGH jobs

Light, compact unit mounts overhead, independent of scaffold, platform or swing stage. Includes Automatic Rewind to keep line taut. Allows free movement, but positively prevents accidental falls. Lowers insurance rates. Furnished with 5/16 nylon rope (1950# tensile strength) or 5/32 stainless steel cable (2500# test).

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COrnelia 7-4010

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. . . the Reader Service postcard will get it for you FAST!

Here's how it works—

Printed below are two identical Reader Service postcards—the bottom one for your use; the top one for later readers of this issue. The numbers listed on each card are keyed to product advertised and the new safety equipment and trade publications described on pages 101 through 112. Just circle the items you want to know more about, and we will ask the manufacturer to send you full information without obligation. Both cards are perforated for easy removal, and no postage is required.

New Safety Equipment

Products featured in this section have been carefully reviewed by Council engineers so as to bring you only what's new and reliable in the safety field. Only new safety and health products, or newsworthy improvements in existing equipment are eligible for listing.

Trade Publications

Here's a wealth of helpful trade literature—catalogs, spec sheets, booklets, brochures—that will help you compare before you buy. Whether you are in the market now, or think you may be at a later date, you'll want these valuable references in your safety equipment data file.

Products Advertised

As you read through this issue of the NEWS, you will find advertisements describing equipment that may help you solve some of your accident problems. Instead of making a "mental note," make sure you get full information by circling the corresponding page number on the Reader Service postcard. The letters L, R, T and B locate the ads on the page—left, right, top and bottom. IFC—inside front cover; IBC—inside back cover; BC—back cover.

IMPORTANT—Be sure to fill in your name, organization and address in the space provided on this side of the postcard.

Please send me more information on the items circled below:

AUGUST, 1955
(Good until November 30, 1955)

NEW SAFETY EQUIPMENT SECTION:

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	

TRADE PUBLICATIONS SECTION:

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
37																	

PRODUCTS ADVERTISED:

IFC	1	3	5	7	9	11	13	15	16	41	43	
44	45	47	49	51	53	55	57	59	61	63	65	
67	69	71	72	73	74	75	76	77	78	79	80	
81	82	83	84	85T	85B	86T	86B	87L	87R	88L	88R	
89T	89B	90T	90B	91L	91R	92T	92B	93T	93B	94T	94B	
95T	95B	96	100TL	100BL	100BR-TR	101T	101B	102	110TL	110BL	110TR	
110BR	113TL	113BL	113TR	113BR	114TL	114BL	114BR	IBC	BC			

NAME.....

POSITION.....

COMPANY.....

ADDRESS.....

CITY & STATE.....

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NEW SAFETY EQUIPMENT SECTION:

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35

TRADE PUBLICATIONS SECTION:

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36
37

PRODUCTS ADVERTISED:

IFC 1 3 5 7 9 11 13 15 16 41 43
44 45 47 49 51 53 55 57 59 61 63 65
67 69 71 72 73 74 75 76 77 78 79 80
81 82 83 84 85T 85B 86T 86B 87L 87R 88L 88R
89T 89B 90T 90B 91L 91R 92T 92B 93T 93B 94T 94B
95T 95B 96 100TL 100BL 100BR-TR 101T 101B 102 110TL 110BL 110TR
110BR 113TL 113BL 113TR 113BR 114TL 114BL 114BR IBC BC

NAME.....

POSITION.....

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ADDRESS.....

CITY & STATE.....

The advertising pages of the News

. . . your guide to reliable suppliers of worthwhile safety equipment

The advertising policy of the NEWS requires that all equipment and products meet established codes and standards, have the approval of recognized testing agencies, or have proven their value through actual use in industry. Council engineers and technicians screen every advertisement to make sure that product description is accurate, and performance claims verified by reliable sources. It should not be construed, however, that products advertised are approved or endorsed by the National Safety Council.

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Before you mail your Reader Service postcard . . .

TAKE ANOTHER LOOK AT

- **the ADVERTISING pages**
- **the NEW SAFETY EQUIPMENT section**
- **the TRADE PUBLICATION section**

Make sure all the items you want to know more about are circled . . . check to make sure your name, organization, and address are printed on the reverse side of the postcard . . . THEN mail it today.

CESCO RIGHT... before your Eyes!

Broad-Bearing* COMFORT-BRIDGE SPECTACLES

*Now available with flexible polyethylene pads

No. 374 CESCO Comfort-Bridge Spectacle

• The secret "weight-less" feel of CESCO Spectacle-Type Goggles with patented Comfort-Bridge lies in the face-fitting design of the broad-bearing bridge pads. The combination of large bearing area and anatomically correct contours rests the weight gently and evenly on the sides of the nose.

Comfort-Bridge Spectacle-Type Goggles are worn all day without discomfort...or complaint. They're a big aid to safety because they close the dangerous gap between nose and goggle frame that results when using many conventional type bridge pads.

Now furnished with regular rigid plastic or the new F-9P flexible polyethylene pads for even greater comfort and correct fit on those workers with unusual nasal contours.

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You can get Comfort-Bridge Spectacle-Type Goggles in a complete range of bridge and lens sizes, with or without side-shields, and with clear Super-Safety or Antiglare lenses. Call your CESCO distributor at once or write direct for further information.

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For the Finest in Hand Protection...

NEW AO "DREDNAUT"

line of COWHIDE GLOVES

They're SPECIALLY TANNED

- You get the Flexibility of Horsehide
- You get the Tensile Strength of Horsehide
- You get the Heat Resistance of Horsehide
- And . . . you get the Abrasive Resistance (Longer Wear) of Cowhide

The "Drednaut" line consists of 6 heavy duty, specially chrome-tanned side-split cowhide gloves styled and tailored with typical AO know-how of what welders want and need. What's more, these gloves are priced to move!

For hot weather, hot job comfort . . . keep production up with AO Sweatbands.

LOOK FOR THE AO "Drednaut" and the light green shade. Your nearest AO Safety Products Representative can supply you.

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